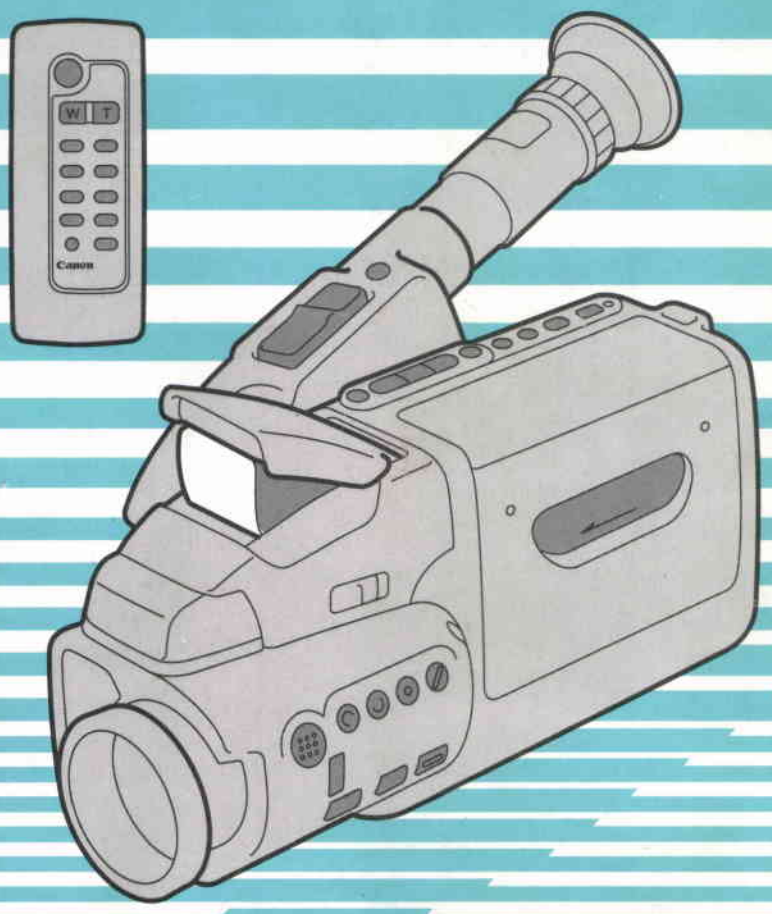
8

Canon E333D

POP-UP LIGHT

8mm VIDEO CAMCORDER

Instruction Manual



E ENGLISH

Thank you for purchasing the Canon 8mm Video Camcorder E333D.
The E333D can be used for both recording and playback of video cassettes in 8mm format.

- **Use 8mm video cassettes marked with an 8 (P5 type).**

Please check that this package contains the following items:

E333D
- Lens Cap and Lens Cap Cord
- Lens Hood
- One Lithium Battery
- WL-52 Wireless Controller
- Two R03 AAA Batteries

DC-100 DC Coupler
BP-E77K Battery Pack
CA-100 Compact Power Adapter
PC-150 SCART Cable
SS-300 Shoulder Strap

Important Usage Instructions

CAUTION:

TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER (OR BACK). NO USER SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.

WARNING:

TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS PRODUCT TO RAIN OR MOISTURE.

CAUTION:

TO REDUCE THE RISK OF ELECTRIC SHOCK AND TO REDUCE ANNOYING INTERFERENCE, USE THE RECOMMENDED ACCESSORIES ONLY.

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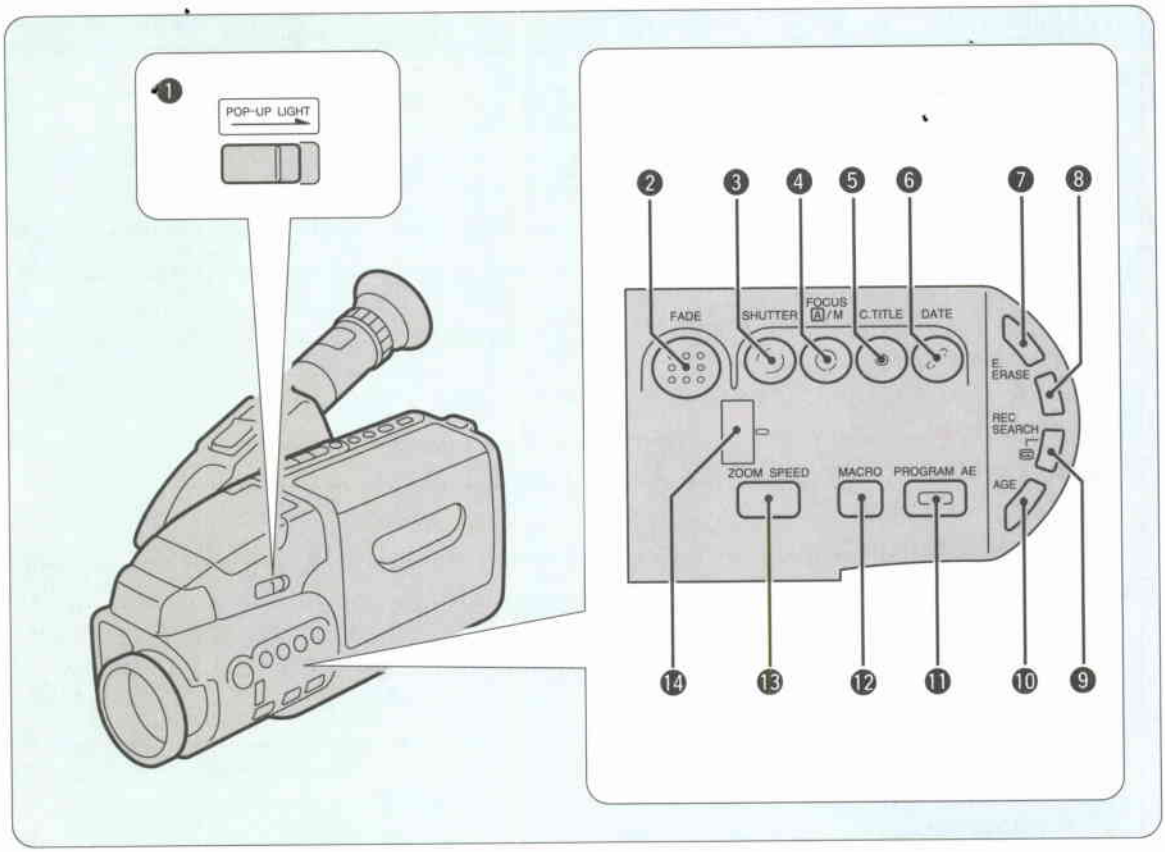
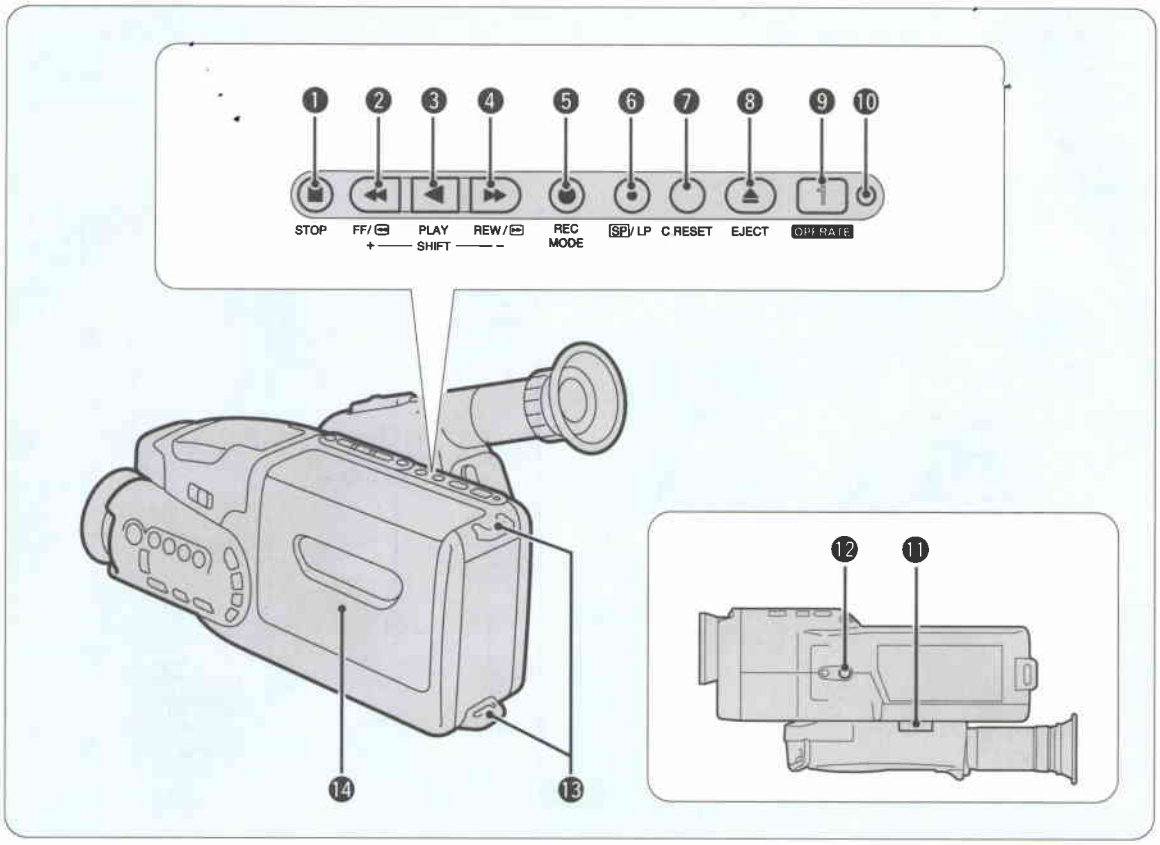
Nomenclature

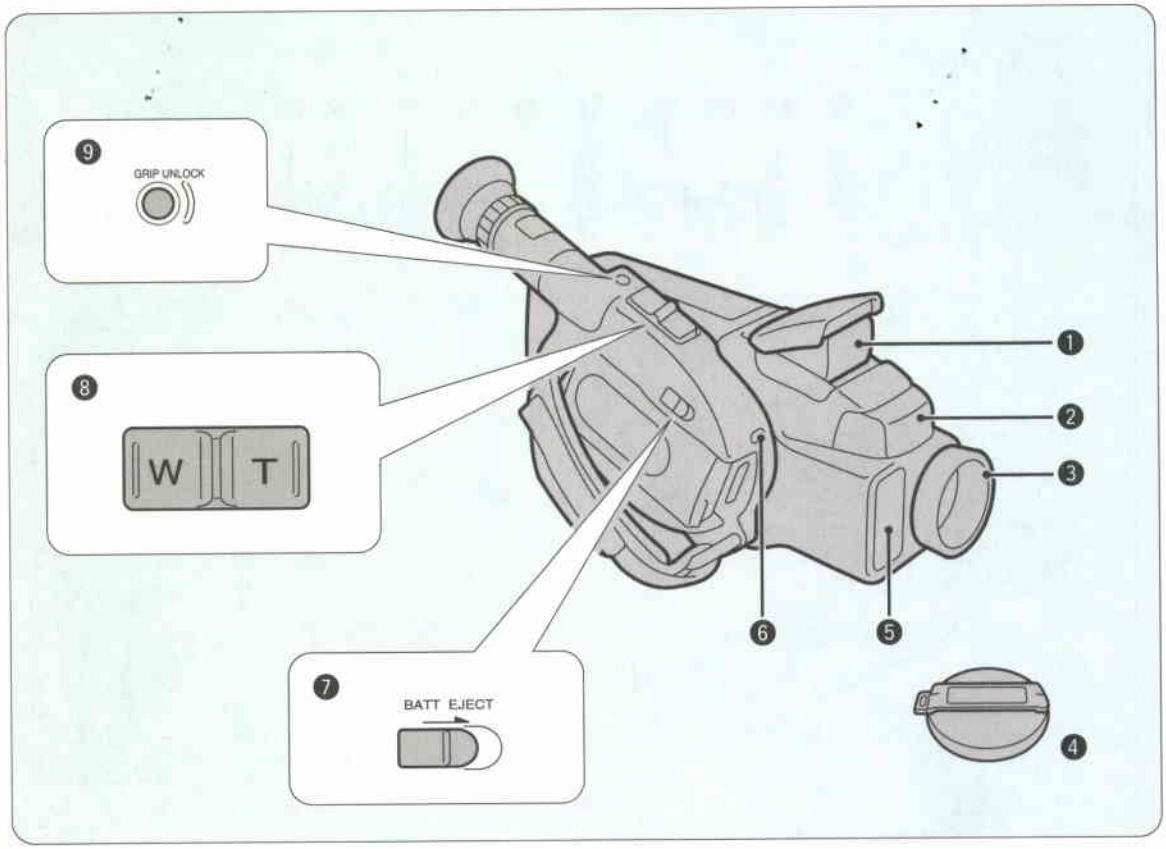


❶ **POP-UP LIGHT** Switch
❷ **FADE** Button
❸ **SHUTTER** Button
❹ **FOCUS** A**/M** (Auto/Manual) Button
❺ **C.** (Character) **TITLE** Button
❻ **DATE** Button
❼ **E.** (Edit) **ERASE** Button
❽ **REC SEARCH** + Button
❾ **REC SEARCH** – Button
(Record Review) Button
❿ **AGE** Button
⓫ **PROGRAM AE** Button
⓬ **MACRO** Button
⓭ **ZOOM SPEED** Button
⓮ Zoom Window

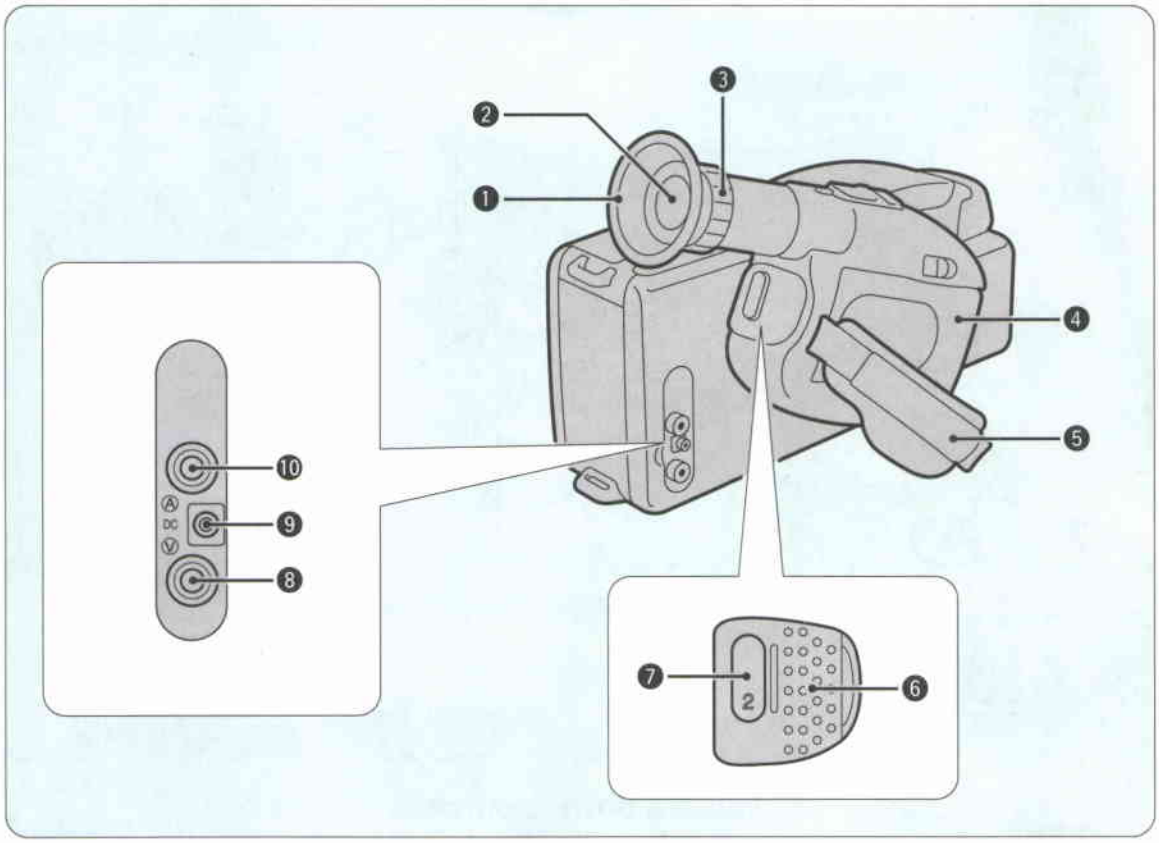


❶ ■ **STOP** Button
❷ ◀◀ **FF** Button / **+** Button
❸ ◀ **PLAY** Button / **SHIFT** Button
❹ ▶▶ **REW** Button / **–** Button
❺ ● **REC** (Record) **MODE** Button
❻ SP / **LP** (Tape Speed) Button
❼ **C.** (Counter) **RESET** Button
❽ ⏏ **EJECT** Button
❾ **OPERATE** Button
❿ **OPERATE** Indicator
- Lights up during normal operation.
- Flashes to warn that there is internal condensation or a malfunction, or to indicate that the battery pack is nearly exhausted.

⓫ Lithium Battery Compartment
⓬ Tripod Socket
⓭ Strap Attachment Bars
⓮ Cassette Compartment

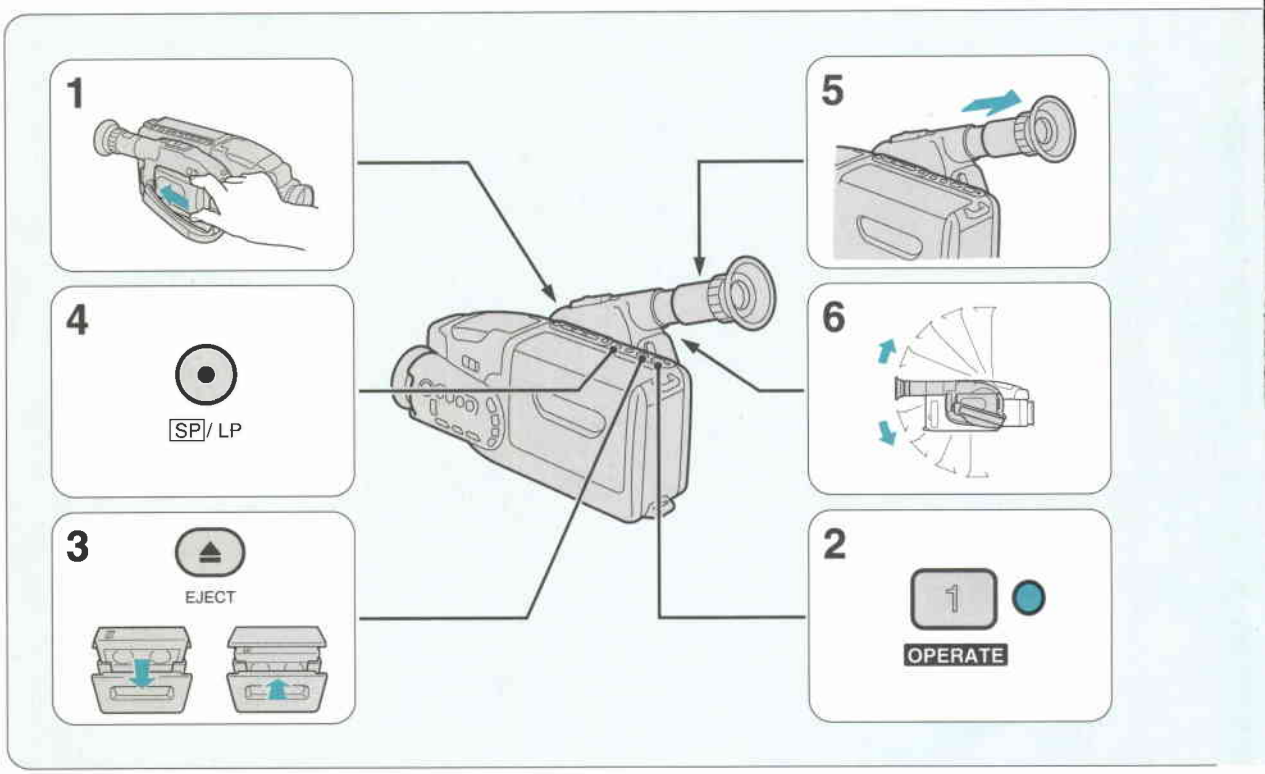


1. Pop-up Light
2. Microphone
3. Focusing Ring / Lens Hood
4. Lens Cap
5. Remote Sensor
   Autofocus Window
6. Tally Lamp
   - Flashes rapidly during recording.
   - Lights up when a wireless controller signal is received.
7. **BATT** (Battery) **EJECT** Switch
8. Power Zoom Buttons
9. **GRIP UNLOCK** Button

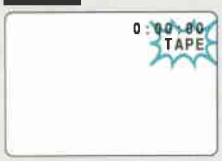


1. Eyecup
2. Viewfinder
3. Dioptre Adjustment Ring
4. Power Source Compartment
5. Grip Belt
6. Thumb Rest
7. Start/Stop Button
8. Video Output Terminal
9. DC Output Terminal
10. Audio Output Terminal

Basic Recording



10-A



10-B

1. Attach a power source.

- See pp. 15–21 for using power sources.

2. Turn the camera on.

- The OPERATE indicator lights up.
- "TAPE" flashes in the viewfinder (see p. 13). 10-A

3. Load a cassette.

- See p. 23 for loading/unloading cassettes.
- Use an 8mm video cassette marked with an 8 (P5 type).
- The camera goes into "record pause mode". 10-B

4. Press the SP/LP button to select the tape speed.

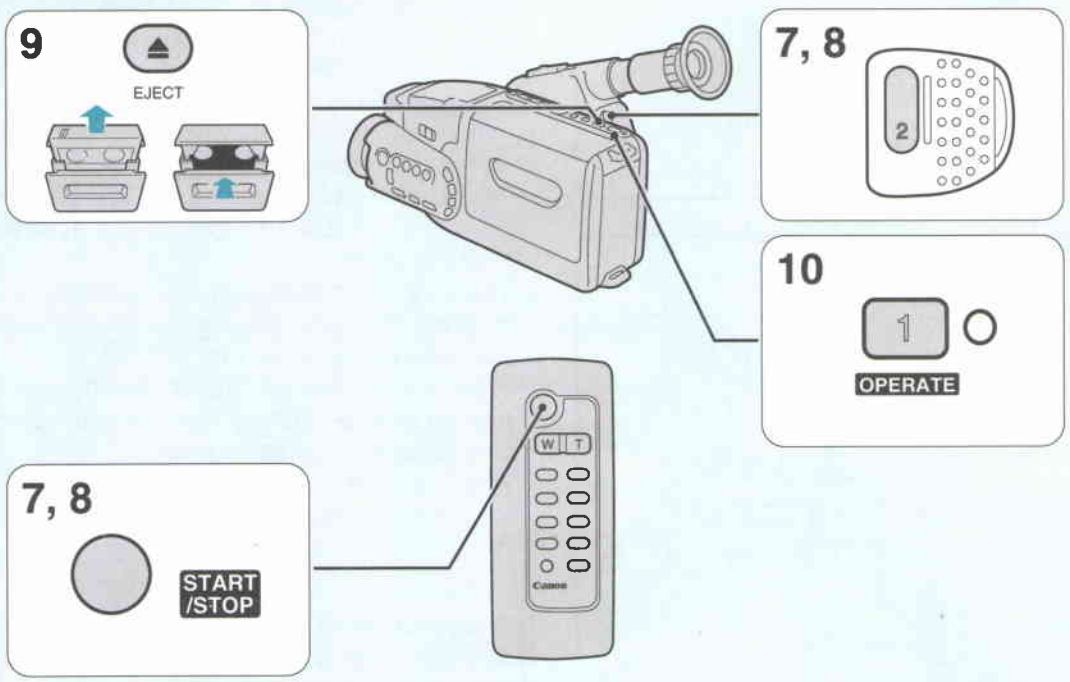
- For best picture quality, select SP.
- For double recording time, select LP.

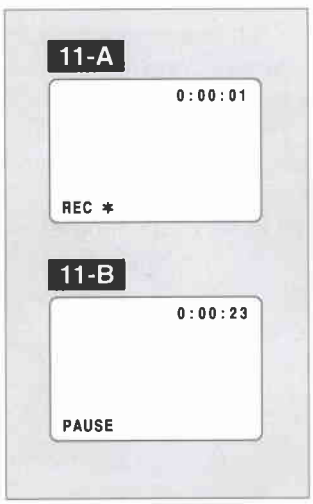
5. Pull out the finder.

- See p. 26 for using the finder.

6. Turn the grip to the desired position.

- See p. 27 for adjusting the grip.





7. Press the start/stop button.

- Recording starts and "REC" appears in the viewfinder. 11-A
- The tally lamp flashes rapidly.
- See "ADVANCED OPERATIONS" (pp. 50–73) for information on making your recordings more effective.

8. Press the start/stop button again to pause recording. 11-B

- Press the start/stop button once again to resume recording.
- See "Record Review" (p. 64) to check your recording.

9. When recording has ended, remove the cassette.

- See p. 23 for loading/unloading cassettes.

10. Turn the camera off.

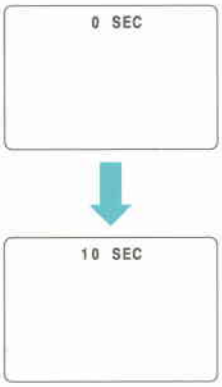
- The OPERATE indicator goes off.

Notes:

- The camera automatically turns off if record pause mode lasts more than approximately seven minutes. To resume recording, turn the camera on and press the start/stop button.
- Avoid recording near sources of electric or magnetic fields, such as a TV tower, which can cause noise in the picture or a camera malfunction.
- If the tape speed is changed during recording, the tape will contain noise at that point.

12-A

12-B



Tape Counter

During recording, the tape counter in the viewfinder indicates how long you have recorded. In the case shown in the diagram, you have recorded for approximately 35 minutes and 40 seconds (in SP mode). 12-A

- The tape counter is reset to 0:00:00 when you press the C. RESET button, or each time you load a cassette.
- The tape counter also appears during playback and record search, so you can use it to verify how long the tape has run.
- Tape counter time and actual recording length may be slightly different. Use the tape counter only as an approximate guide.
- When recording in LP mode, actual recording length is approximately twice the tape counter time.

Recording Reminder

When you start to record, the camera counts off the first 10 seconds of your recording and displays from "0 SEC" to "10 SEC" in the viewfinder. This is to help you make sure your scenes aren't too short, for easy viewing and editing. Try to record for at least the full 10 seconds. 12-B

- Recording reminder time and actual recording length may be slightly different. Use the recording reminder only as an approximate guide.

13-A

13-B

13-C

Video Cassette Warnings 13-A

- "T. END" appears in the viewfinder when the tape is completely used up.
- "TAPE" flashes in the viewfinder if the camera is turned on and a cassette is not loaded.

Battery Pack Warning 13-B

- "BATT" flashes in the viewfinder when the battery pack is nearly exhausted.
- If the camera is turned on with an exhausted battery pack attached, it may turn off immediately, without a "BATT" warning.

Recording Using Tripod 13-C

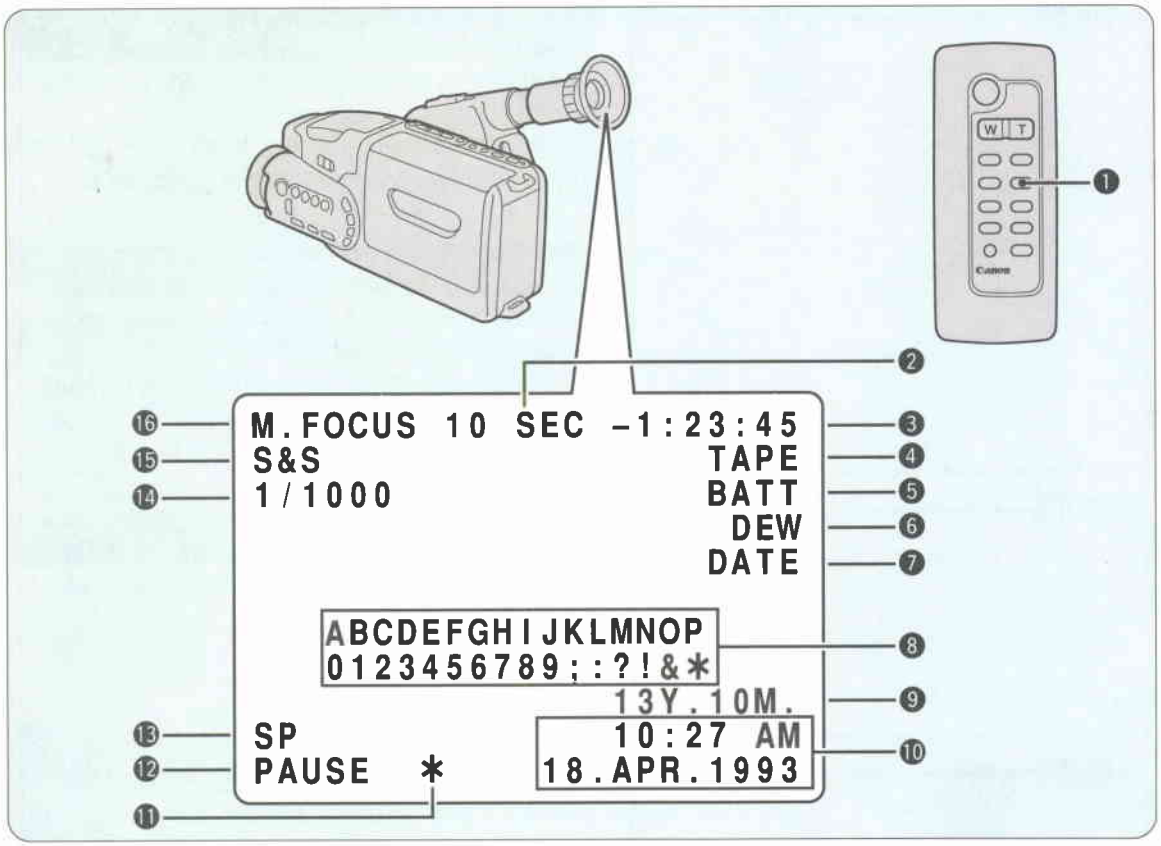
Use a tripod especially in the following cases:

- Telephoto recording
- Macro recording
- Recording using wireless controller

Note:

- Be sure to protect the viewfinder from direct sunlight, otherwise the viewfinder will melt.

Viewfinder Displays



Viewfinder displays provide information and warnings regarding camera operation.

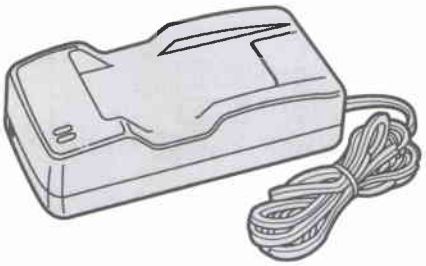
- Press the ON SCREEN button ❶ on the wireless controller to see the viewfinder displays except ❽, ❾ and ❿ on a connected TV screen.
- Press the C. TITLE button to see the character title on TV, the DATE button for date and time and the AGE button for age. Only the title, date and time, and age are recorded with scenes.

No.	Mode	
❷	Recording Reminder	p. 12
❸	Tape Counter	p. 12
❹	Video Cassette Warning	p. 13
❺	Battery Warning	p. 13
❻	Condensation Warning	p. 81
❼	Lithium Battery Warning	p. 22
❽	Character Title	p. 68
❾	Age Insert	p. 34

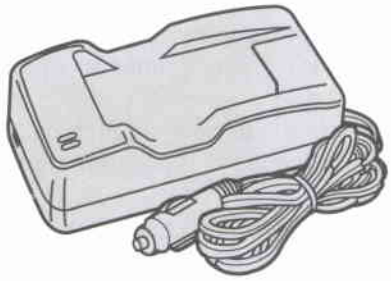
No.	Mode	
❿	Date and Time	p. 29, 33
⓫	Edit-erase	p. 66
⓬	Tape Operations	p. 10
⓭	Tape Speed	p. 10
⓮	High-Speed Shutter	p. 59
⓯	Program AE	p. 53
⓰	Manual Focus	p. 51

Power Sources

15-A

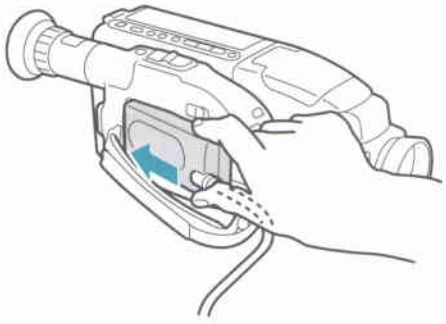


15-B



15-C

1



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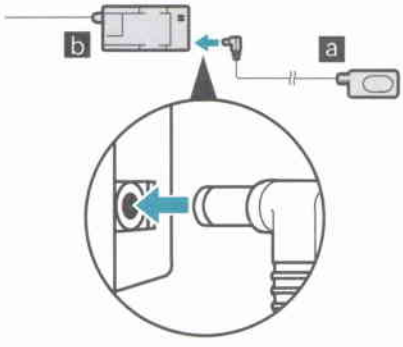


Using AC Power

CA-100 Compact Power Adapter 15-A

Plug into mains outlet.
Input voltage: 100—240 V AC, 50/60 Hz.

- Use together with the DC-100 DC Coupler.
- Refer to CA-100 instruction manual for further details.

Using Car Battery

CB-110 Car Battery Adapter (option) 15-B

Plug into cigarette lighter socket.
For use only with 12 or 24 V DC negative-ground car battery.

- Use together with the DC-100 DC Coupler.
- Use car battery adapter with the car engine idling.
- Refer to CB-110 instruction manual for further details.

Attaching DC Coupler 15-C

To use the compact power adapter or car battery adapter:

1. Insert the DC-100 DC Coupler into the power source compartment.

- Insert and remove in the same way as the battery pack (see p. 17).

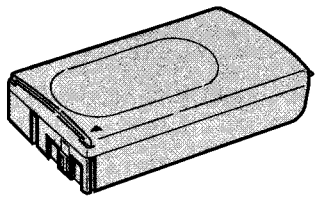
2. Connect the DC-100 cable to the compact power adapter (or car battery adapter).

a DC-100
b CA-100 (CB-110)

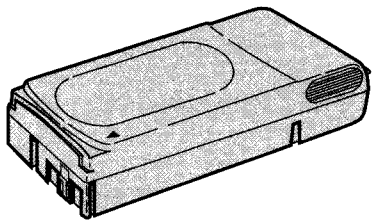
Caution

- Using the compact power adapter near the TV may cause the TV to emit noise. If this occurs, move the compact power adapter further away from the TV or aerial cable.

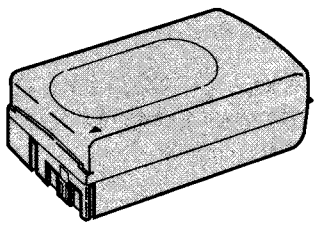
16-A



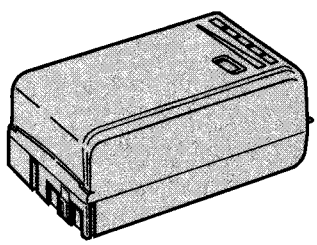
16-B



16-C



16-D



Using Battery Pack

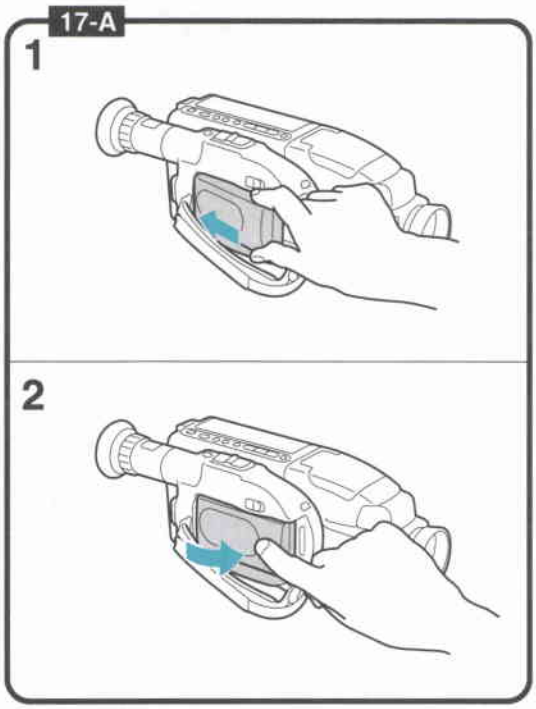
BP-E77K 16-A
BP-E718 (option) 16-B
BP-E722 (option) 16-C
BP-E722D (option) 16-D **Battery Pack**

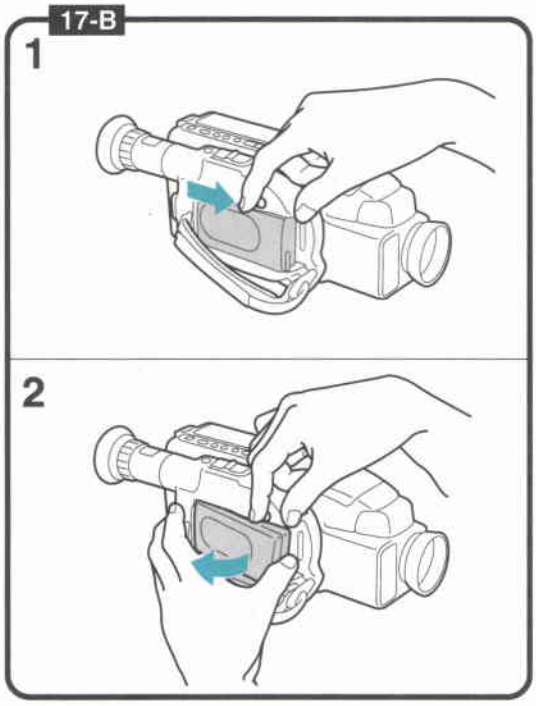
Make sure the battery pack is fully charged before use.

Continuous recording time using the BP-E77K is approximately 50 minutes.

- Some modes consume more power than others, so actual recording time may be less than 50 minutes.
- The safest policy is to have enough batteries to cover two to three times the length of recording time scheduled.
- Using the battery pack in cold temperatures will shorten recording time.
- The battery pack normally becomes warm during use.
- Use the optional BP-E718, BP-E722 or BP-E722D Battery Pack for lengthy recording (see p. 76).
- See the battery pack instruction manual for further information regarding your battery pack.
- See p. 19 for Using Your Battery Packs Effectively.

- Canon camcorders and accessories are manufactured with great care and strict quality control. It is recommended that you use only genuine Canon brand batteries and other accessories for your camcorder to ensure maximum performance.





Attaching Battery Pack 17-A

1. Slide the battery pack into the power source compartment.

- Insert the end marked with a triangle.
- Slightly loosen the grip belt and press it down for easy battery loading.

2. Press the battery pack until it clicks and locks in place.

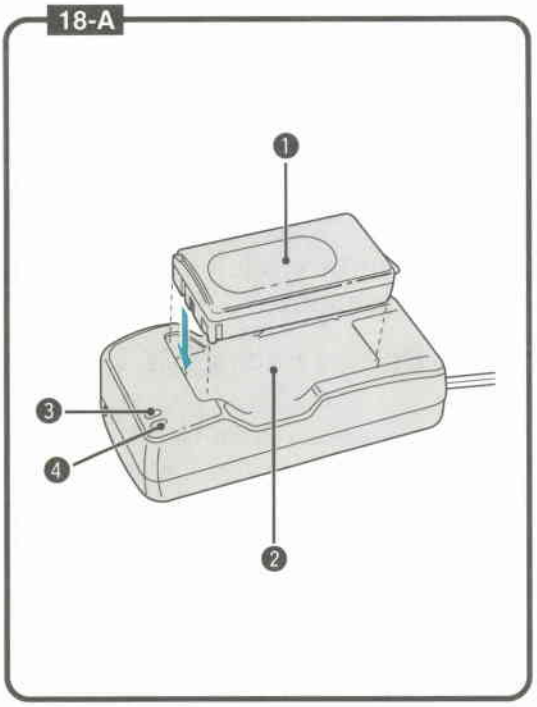
Removing Battery Pack 17-B

Caution

Be sure to turn the camera off (the OPERATE indicator goes off) before removing the battery pack. Removal during operation may cause damage.

1. Slide and hold the BATT EJECT switch.

2. Pull the battery pack out as shown.



Charging Battery Pack 18-A

Use the CA-100 Compact Power Adapter or the optional CB-110 Car Battery Adapter to charge the battery pack.

Connect the battery pack to the CA-100 (or CB-110) as shown and plug into a mains outlet (or car cigarette lighter socket).

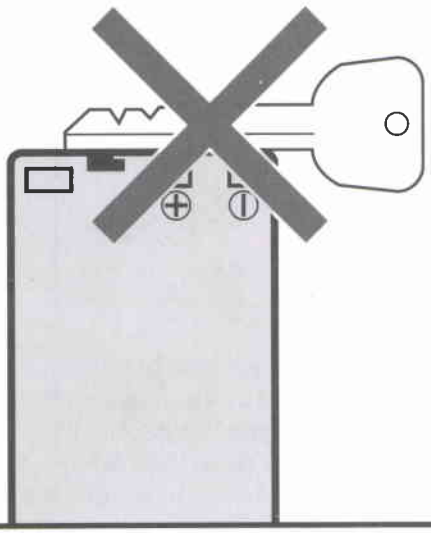
When the operate indicator (green) is glowing steadily and the charge indicator (red) is blinking, charging has begun. When the battery pack is fully charged, the charge indicator will glow steadily. Disconnect the battery pack from CA-100 (or CB-110).

❶ Battery Pack
❷ CA-100 Compact Power Adapter or CB-110 Car Battery Adapter
❸ Charge Indicator
❹ Operate Indicator

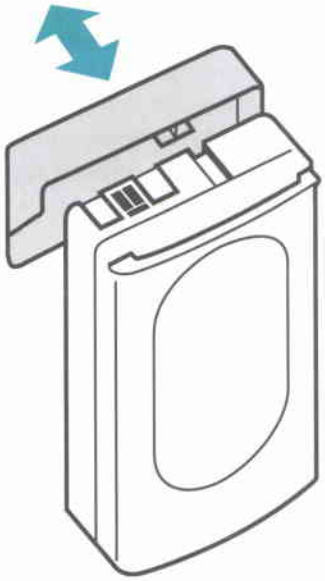
- Always disconnect the DC-100 DC Coupler from the CA-100 (or CB-110) before charging the battery pack.
- Battery pack charging times are shown below. Charging time will vary according to the ambient temperature.
- When you don't expect to use the battery pack for a long time (three months or more), **store it in a discharged condition**. Storing the battery pack in a charged condition will shorten its operating life.
- The optional MC-100 Multi-battery Charger can also be used.
  For further information, see the adapter or charger instruction manual.

Battery Pack	Continuous recording time (approximate minutes)	Charging time (approximate minutes)
BP-E77K	55	70
BP-E718	100	120
BP-E722/BP-E722D	115	130

19-A



19-B



Using Your Battery Packs Effectively

Keep the following in mind:

1. Charge a brand-new battery before using.
2. Discharge the battery for storage.
3. Recharge the battery only after discharging it completely.

Read these instructions thoroughly before using the battery pack. The battery pack is a rechargeable nickel cadmium (NiCd) battery. It can be used repeatedly after recharging. The battery pack has not been charged before shipping.

Charge the battery pack before using:

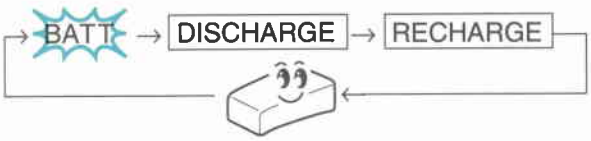
- Use only the battery charger(s) specified in this manual.
- Refer to the battery charger instructions for charging procedure and charging time.
- To maximize the capacity of the battery pack, when using a brand-new battery pack for the first time, charge it once (the charge lamp lights up), remove it and charge it once again.
- The battery pack remains warm immediately after charging or use. Though being warm has no adverse effect on the performance of the battery pack, charge the battery pack only after it has cooled.

Observe the following:

- Shorting the + and – terminals by touching them with a metal object such as a key holder is extremely dangerous, as it can cause fire or other damage. 19-A
  When carrying or storing the battery pack, make sure to attach the included short circuit prevention cap. 19-B
- Do not expose the battery pack to fire. It might explode .
- Do not disassemble or alter the battery pack.
- Do not drop the battery pack or subject it to strong shocks.
- Do not get the battery pack wet.

To charge battery packs effectively:

- Even a newly-charged battery pack naturally discharges in time. Charge it within a couple of days of when it is to be used.
- Charge the battery pack only after the power supply of the camcorder automatically turns off.
- Repeated recharging of a battery pack which is not fully discharged shortens the time that the battery pack can be used before it needs charging again.



- When you haven't used the battery pack for several months, check the charge lamp 30 minutes after charging has begun. If the charge lamp does not blink for at least 30 minutes, it may mean that the time you will be able to use the battery has decreased.
- If the usage time has decreased try one of the following procedures to restore the battery pack:
  - Discharge the battery pack with a Canon product that has a discharge function, such as the MC-100, then recharge the battery pack.
  - Recharge the battery pack after the power supply has automatically turned off while you are using the camcorder. Repeated operation in this way is also effective.

COLD WEATHER USE:

Although the battery pack can be used at temperatures between 0°C and 40°C, it is recommended that the battery pack be used between 10°C and 30°C in order to take advantage of its full capacity.

To use the battery pack effectively:

- When a battery pack is kept attached to the camcorder or video light, a very small amount of current flows into the equipment, resulting in an overdischarge. Since the battery pack cannot be fully recharged once it has overdischarged, always remove the battery pack from video equipment after use.
- Always keep the terminals clean. If they get dirty, wipe them with a soft, dry cloth.
- Once camcorder is turned on, batttery power is being consumed even when not recording (pause, etc.). Turn the camcorder off when not shooting.
- When the battery charge is low "BATT" flashes in the viewfinder, but the battery can still operate the camcorder for several seconds. Always fully discharge the battery pack (the power supply cuts off automatically) before storing.

Terminology

Overcharging

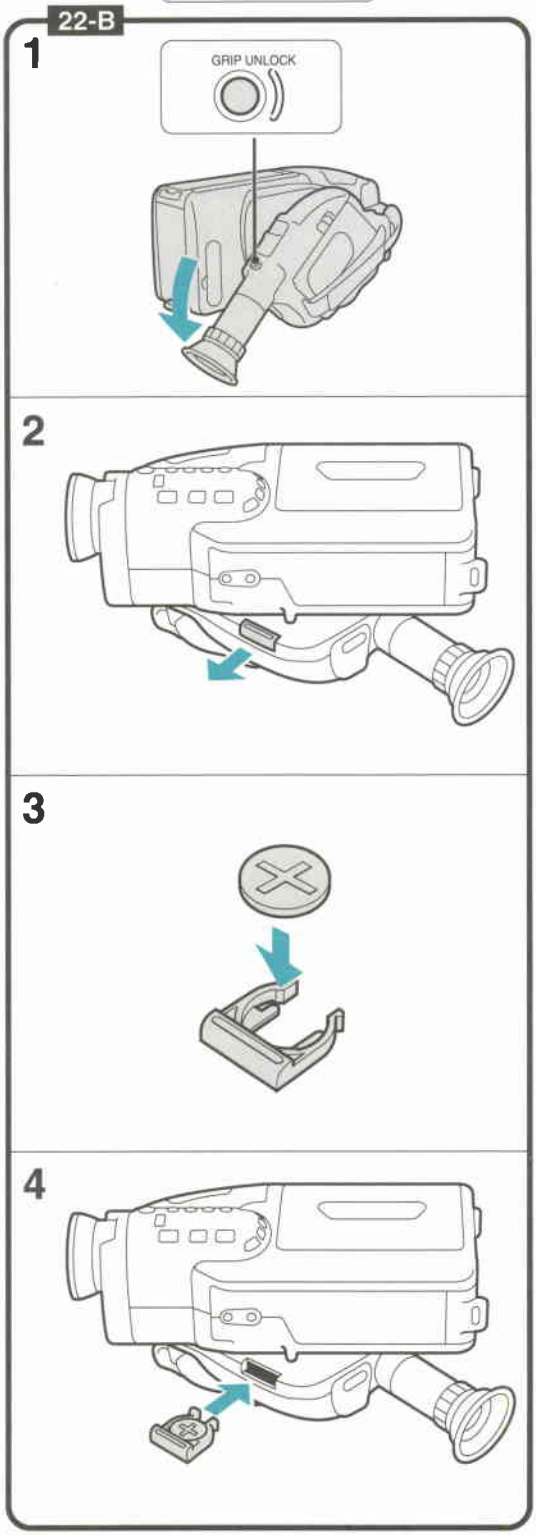
Charging a battery pack after it has already been fully charged.

Overdischarging

Continuing to discharge a battery pack after its voltage level has fallen below a specified level (5.0 V for the nickel-cadmium batteries used by Canon 8mm video camcorders).

22-A

22-B



Inserting a New Lithium Battery

The CR2025 lithium battery provides your camera with enough power to store character titles, date and time, and an age, even when the camera is turned off.
One lithium battery will last approximately one year. (Life span varies slightly according to ambient conditions.) When the lithium battery is not in place or is nearly exhausted, "DATE" flashes in the viewfinder indicating that the lithium battery needs to be replaced. 22-A
Be sure to connect a power source to the camera before changing the lithium battery, otherwise the titles, date and time, and age will be cleared from the camera's memory and will have to be reset.

Inserting Procedure 22-B

1. **Press the GRIP UNLOCK button and rotate the grip downward.**
2. **Hold the camera with the battery pack facing down, then draw out the lithium battery holder.**
   - If the camera is held with the battery pack facing up, the lithium battery will drop out when the lithium battery holder is removed.
3. **Insert a new lithium battery into the lithium battery holder with the + side facing up.**
4. **Snap the lithium battery holder back into the compartment.**

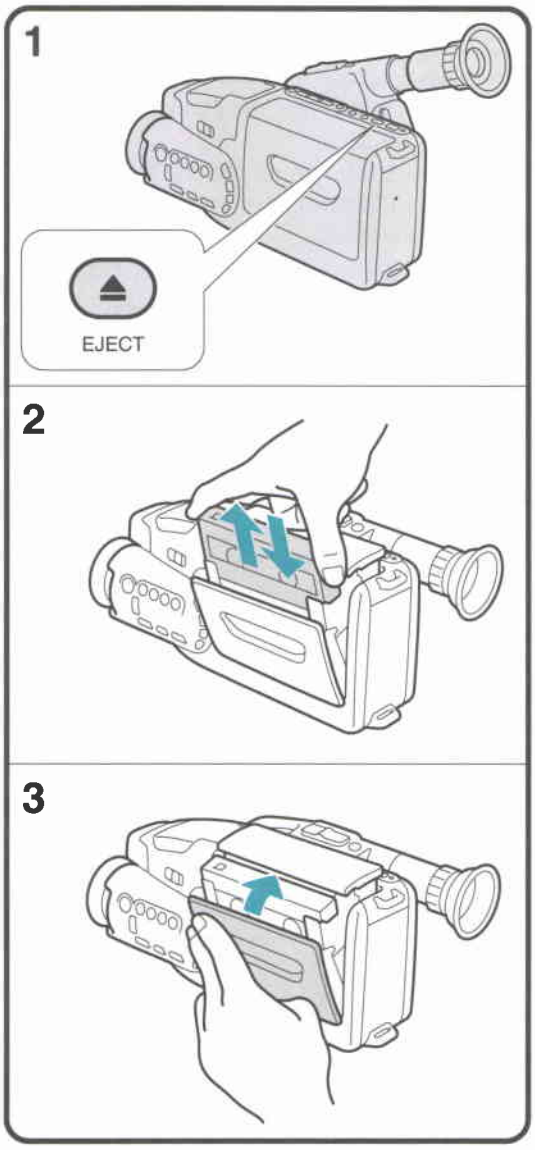
Warning

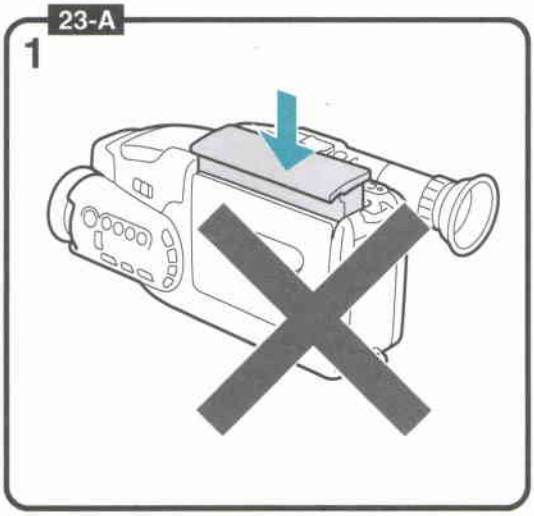
The battery used in this device may present a fire or chemical burn hazard if mistreated. Do not recharge, disassemble, heat above 100°C or incinerate. Replace the battery with Sanyo CR2025, Panasonic CR2025 or Duracell DL2025B. Use of another battery may present a risk of fire or explosion. The used battery should be handed back to the supplier for safe disposal.

Caution

- Make sure the plus (+) side is facing up in the lithium battery compartment.
- Keep the battery out of children's reach. If swallowed, contact physician immediately.
- To ensure proper contact, wipe the battery with the clean, dry cloth before use.
- Do not pick up the battery using tweezers or other metal tools which may cause short circuiting.
- Do not disassemble, heat or immerse in water, to avoid risk of explosion.

Loading and Unloading Video Cassettes





- Use a video cassette with the 8 mark (P5 type). Be sure to attach a power source to the camera before loading or unloading a video cassette.

1. Press the ⏏ (EJECT) button.

- The cassette compartment lifts up and opens.
- The EJECT button works with the power turned off, as long as a power source is attached.

2. Load/unload the cassette.

- When loading, gently insert the cassette with the window facing out.
- When unloading, remove the cassette by pulling it straight out.

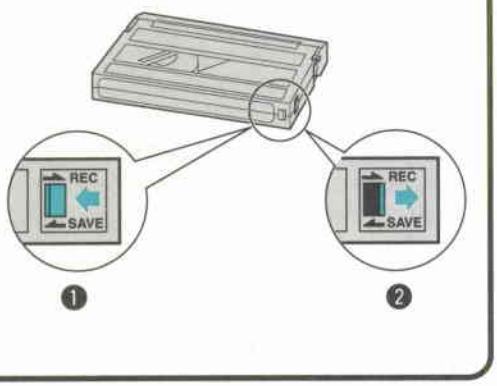
3. Close the cassette compartment.

- Press the PUSH mark on the compartment until it clicks.
- The compartment closes automatically.

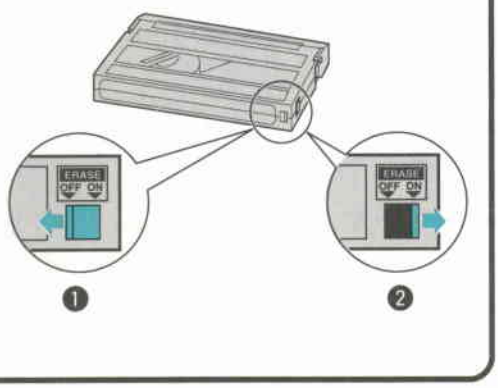
Notes:

- When the EJECT button is pressed, the compartment opens automatically. Do not try to open the compartment during this automatic stage, as it may cause a malfunction.
- If a cassette is removed and then replaced, the tape position will change slightly, therefore, after reloading the cassette, use the record search function to locate the desired starting point (see page 63).
- When you close the video cassette compartment, do not press down the top of the compartment. 23-A

24-A



24-B



Video Cassette Notes

- Do not leave a cassette in the camera after use, especially when the camera will not be in use for a long time.
- There are several holes on the cassette back, which are used for transferring information. Do not cover them.
- Do not use cassettes with damaged or spliced tape or ones that do not meet standards.

Video Cassette Erasure Prevention Switch

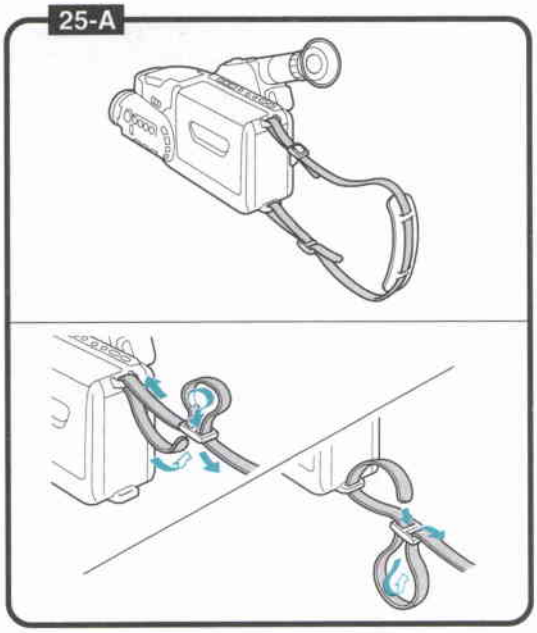
To prevent accidental erasure of recorded material, slide the switch at the bottom of the cassette to the "SAVE" or "ERASE OFF" position, as shown.
Returning the switch to the "REC" or "ERASE ON" position enables recording again.
Refer to the cassette instructions for further information on erasure prevention.

- "TAPE" flashes in the viewfinder if you try to record on a cassette that has been set for erasure prevention. Use another cassette or set the switch to enable recording.

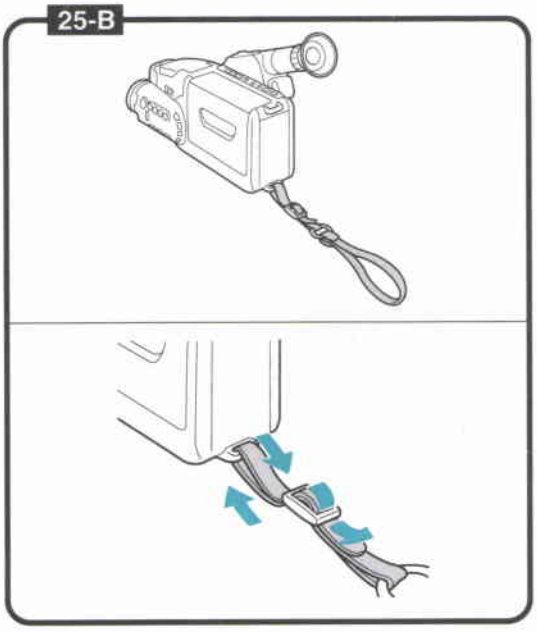
Metal • HG 24-A
Standard 8 mm MP 24-B

❶ In the "SAVE" or "ERASE OFF" position: Erasure Prevention
❷ In the "REC" or "ERASE ON" position: Recording Possible

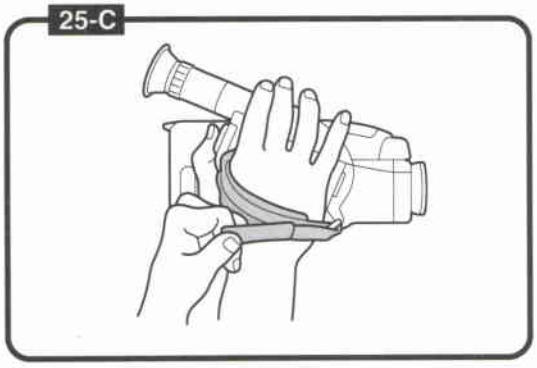
25-A



25-B



25-C



Attaching Straps

SS-300 Shoulder Strap 25-A

Attach the shoulder strap to the strap attachment bars, and adjust it to the most comfortable length.

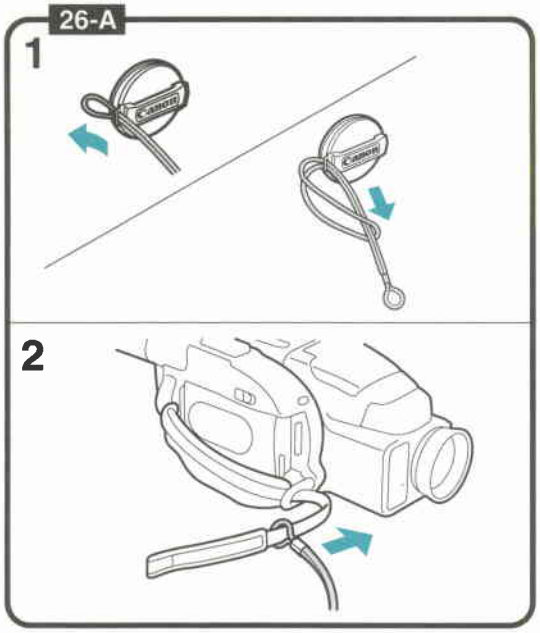
WS-20 Wrist Strap (option) 25-B

The optional wrist strap can only be attached to the lower strap attachment bar.

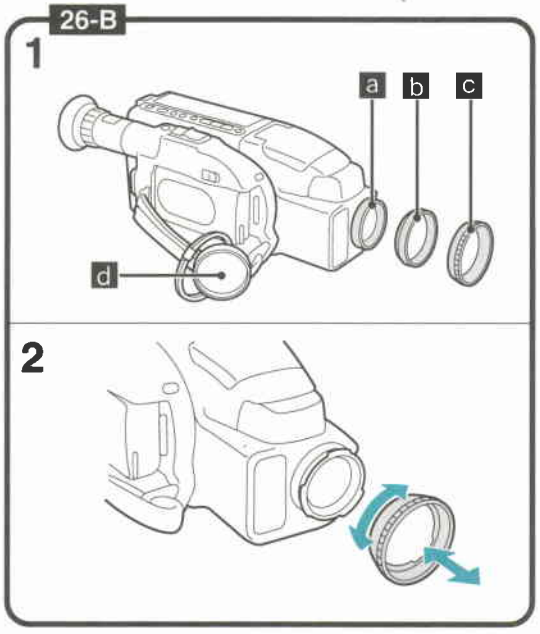
Adjusting the Grip Belt 25-C

Tighten or loosen the grip belt as necessary for a comfortable fit. Hold the grip with your right hand while adjusting the grip belt with your left.

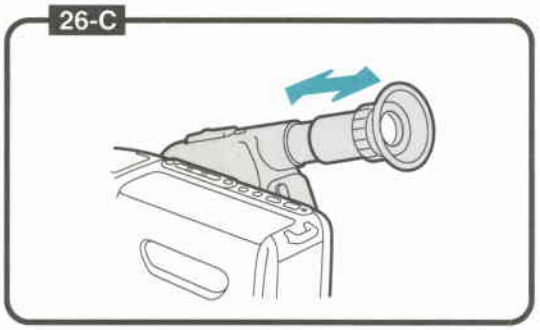
26-A



26-B



26-C



Attaching the Lens Cap Cord 26-A

1. **Pass the cord through the eyelet on the lens cap.**
2. **Pass the grip belt through the loop on the cord as shown.**

Removing and Attaching the Lens Cap and Lens Hood 26-B

Remove the lens cap before recording and hook it onto the grip belt using the clip on the lens cap. Replace the lens cap when you stop recording or turn the camera off.

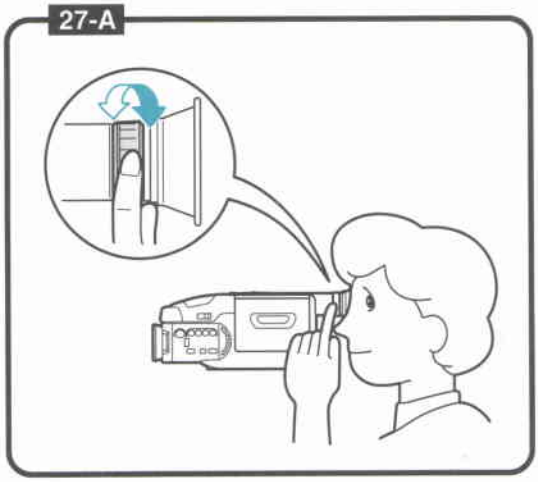
a Focusing Ring
b Filter (option)
c Lens Hood
d Lens Cap

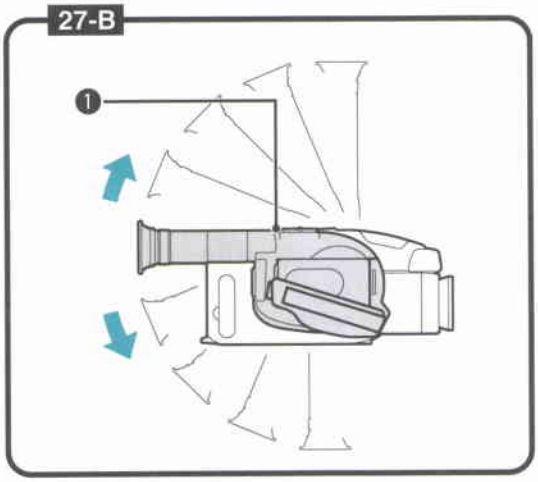
To remove the lens hood:
Gently rotate it anti-clockwise, as shown.
To attach the lens hood:
Gently rotate it clockwise until it clicks into place.

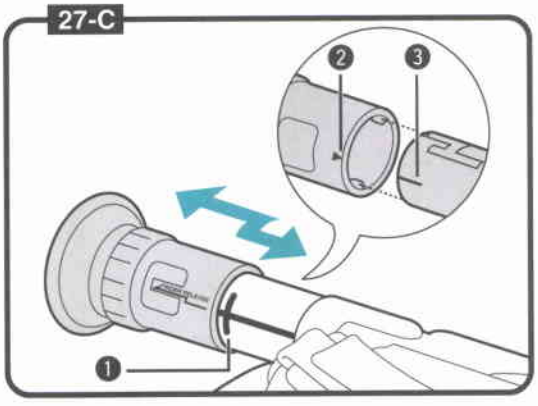
- When using a filter, attach the lens hood in front of the filter so that the lens cap can be replaced.

Using the Finder 26-C

When using the finder, pull it out fully until it stops.
When the finder is not pulled out, you can see your recording from as much as an arm's length away.







Adjusting the Dioptre 27-A

Adjust the dioptre when using the camera for the first time, when changing camera operators, or when changing eye distance from the finder.
To adjust the dioptre:
Turn the camera on and turn the dioptre adjustment ring until the viewfinder displays are clearly visible.

Adjusting the 180° FlexiGrip 27-B

The 180° FlexiGrip allows you to adjust the camera angle to 9 click-positions (every 22.5°). Turn the grip while pressing the GRIP UNLOCK button and release the button in the most convenient position for shooting.
❶ GRIP UNLOCK Button

Removing and Attaching the Finder 27-C

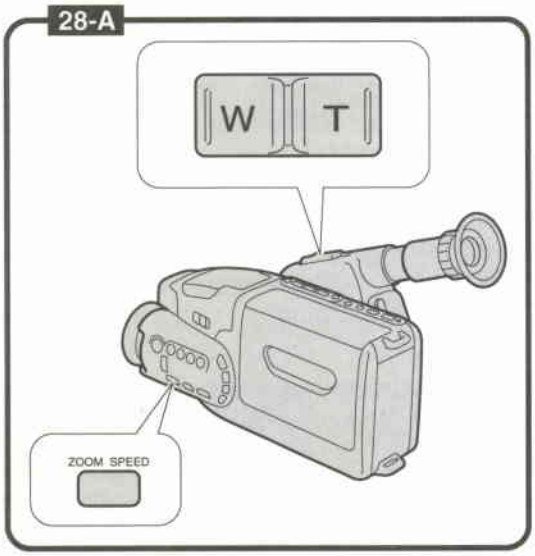
To clean the viewfinder screen, remove the finder then use a commercially available blower brush.
To remove:
Pull out to the mark ❶, rotate anti-clockwise, and pull off.
To attach:
Align the mark ❷ on the finder with the mark ❸ on the grip, push in, rotate clockwise, and push in fully.

Notes:

- Be sure to protect the viewfinder from direct sunlight, otherwise the viewfinder will melt.

Zooming

28-A



Zoom in on hard-to-catch subjects or add close-up personal touches to your recordings. Zoom out to reveal a breathtaking view. The camera has two zooming methods: power zoom and wireless zoom.

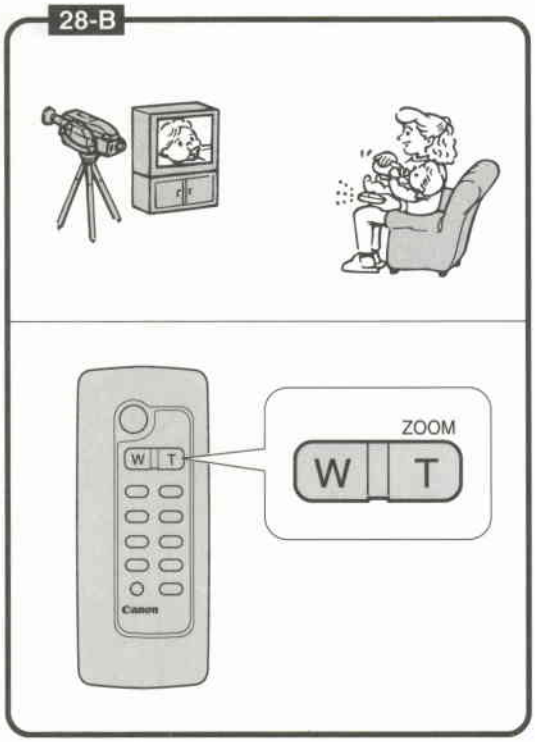
Power Zoom 28-A

Press the power zoom buttons on the grip.

- Press and hold T to gradually zoom in to telephoto.
- Press and hold W to gradually zoom out to wide angle.

In record pause mode, you can increase the zoom speed by holding down the ZOOM SPEED button.

28-B



Wireless Zoom 28-B

The wireless controller allows you to control zoom operation from a distance.

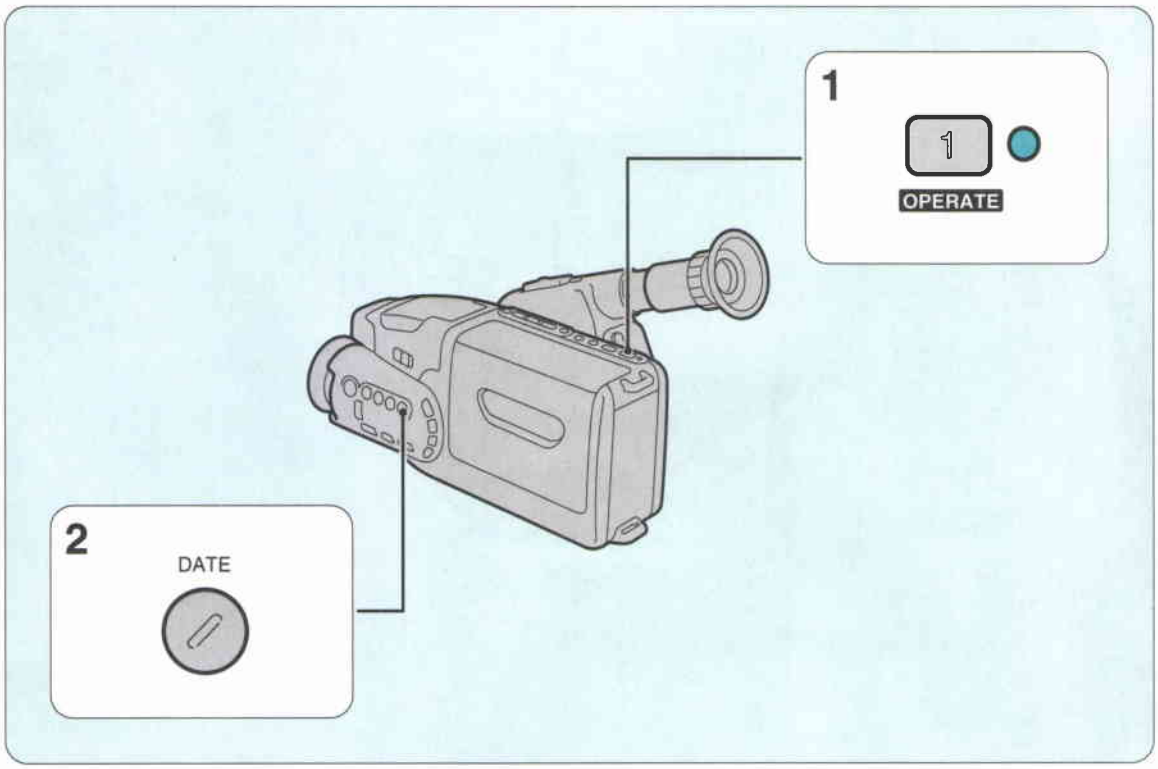
- Press and hold the ZOOM T button to gradually zoom in to telephoto.
- Press and hold the ZOOM W button to gradually zoom out to wide angle.

During wireless zooming, mount the camera on a tripod and monitor your recording on a connected TV screen.

Notes:

- Even the slightest hand movement will appear in the recording when shooting in the telephoto range. Use a tripod for better results.
- Overuse of zooming may make recordings seem too busy. Selective use of zooming is more effective.

Setting Date and Time



Set the date and time when you first begin using the camera and if you change the lithium battery without back-up power.
See p. 33 for recording the date and time.

Example: Setting the date to 20 March, 1994 and the time to 2:35 p.m.

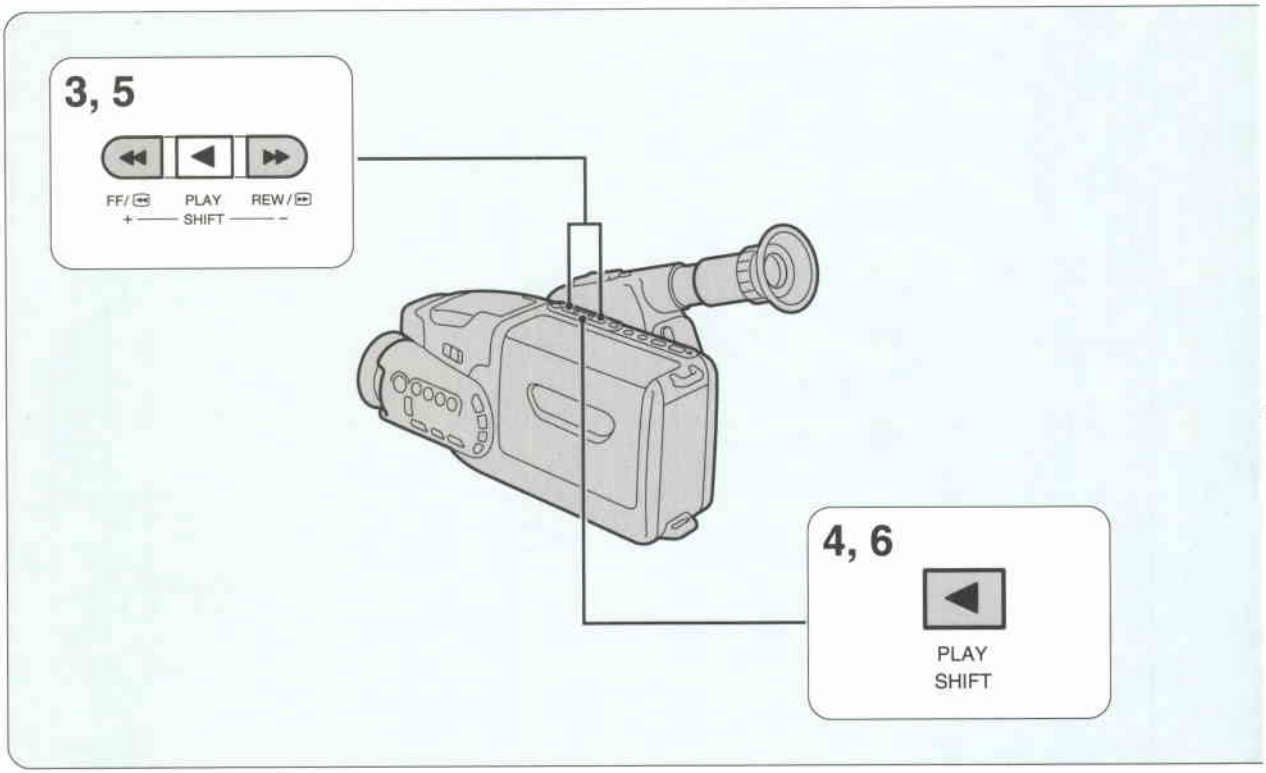
1. Turn the camera on by pressing the OPERATE button.

- The OPERATE indicator lights up.

2. Press and hold the DATE button for more than 3 seconds. 29-A

- The date and time are displayed in the viewfinder.
- The year display flashes.

(continued on next page)



30-A

30-B

30-C

30-D

3. Press the + and – buttons to scan the year display. 30-A

- Press once to scan one year at a time.
- Press and hold to scan the years quickly.
- Press the – button to scan the display in reverse order.

↻ 1993 ↔ 1994 ↔ ••••• ↔ 2010 ↔ 2011 ↔ 2012 ↺

4. Press the SHIFT button when the correct year is shown.

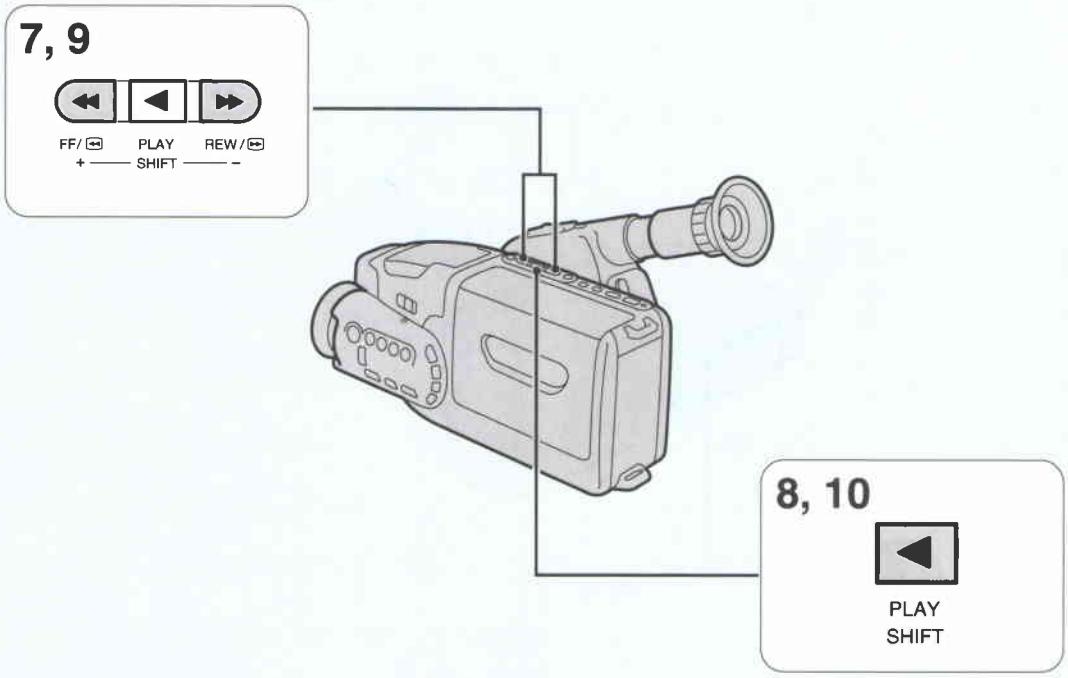
- The year is set and the month display flashes. 30-B

5. Press the + and – buttons to scan the month display. 30-C

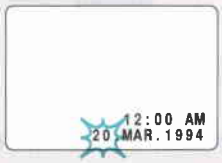
↻ JAN ↔ FEB ↔ ••••• ↔ OCT ↔ NOV ↔ DEC ↺

6. Press the SHIFT button when the correct month is shown.

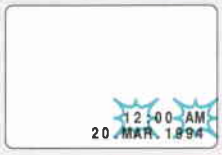
- The month is set and the day display flashes. 30-D



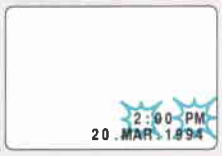
31-A



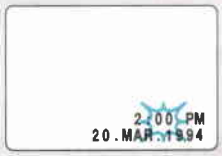
31-B



31-C



31-D



7. Press the + and – buttons to scan the day display. 31-A

- The camera knows the number of days in each month and which years are leap years.

↻ 1 ↔ 2 ↔ 3 ↔ 4 ↔ 5 ↔ ••••• ↔ 27 ↔ 28 ↔ 29 ↔ 30 ↔ 31 ↺

8. Press the SHIFT button when the correct day is shown.

- The date is set and the hour display flashes. 31-B

9. Press the + and – buttons to scan hour display.

- The hour display rotates through 24 hours. 31-C

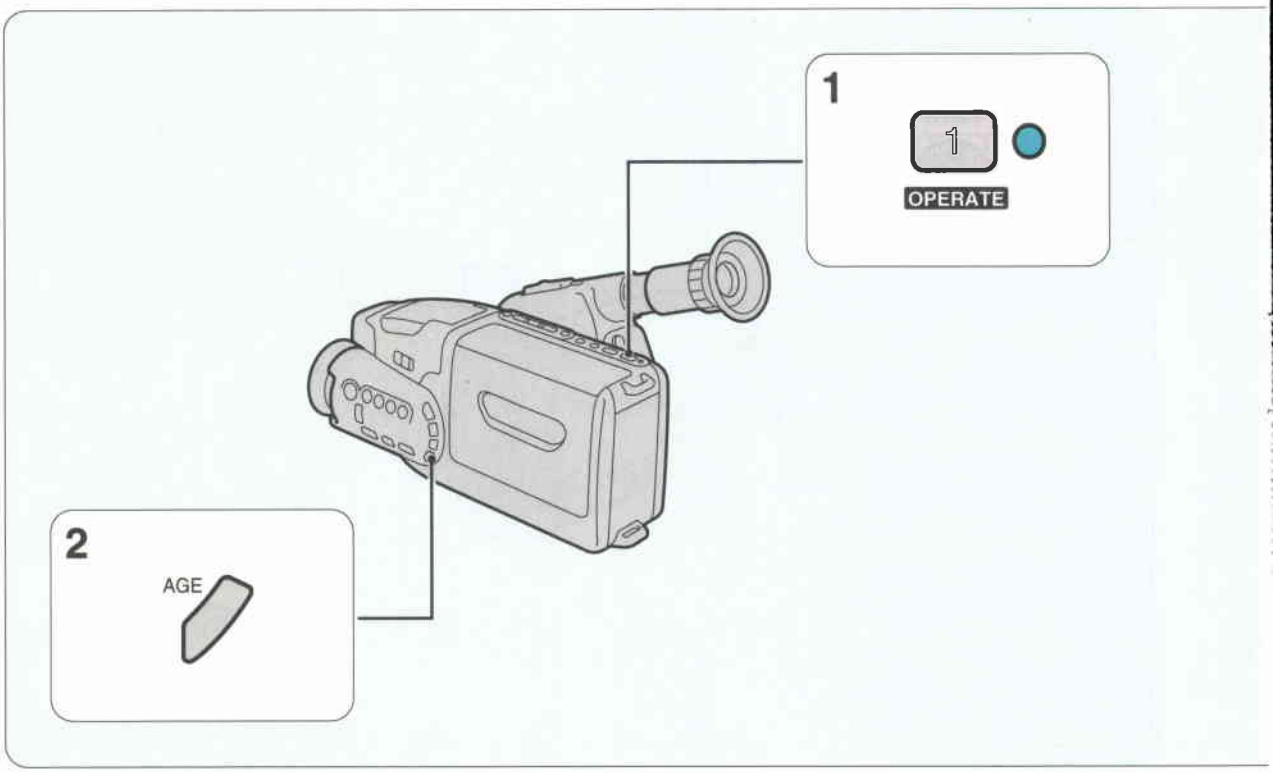
↻ 12AM ↔ 1AM ↔ ••••• ↔ 10PM ↔ 11PM ↺

10. Press the SHIFT button when the correct hour is shown.

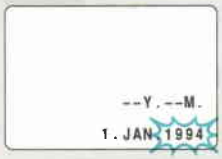
- The hour is set and the minute display flashes. 31-D

(continued on next page)

Age Insert



34-A



The camera can calculate, superimpose and record one person's age with a scene. You can also record the age with the date and time and/or a title.

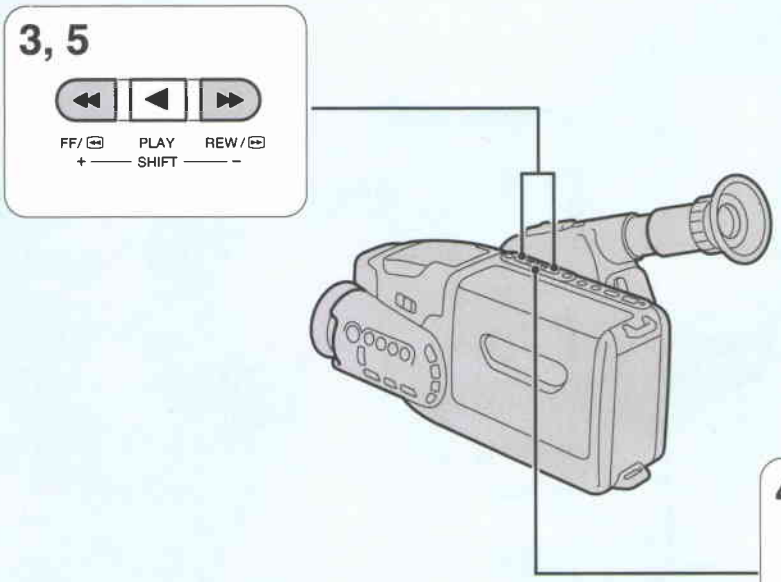
Registering a Birthday

Example: Registering 20 March, 1993 as a birthday (when the current date is set to 20 March, 1994).

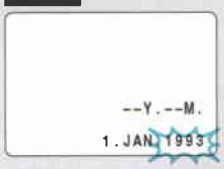
1. Turn the camera on.

2. Press and hold the AGE button for more than 3 seconds. 34-A

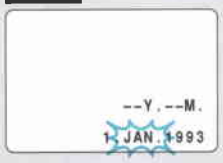
- If you have already registered a birthday, the birthday is displayed in the viewfinder.
- The year flashes in the viewfinder.



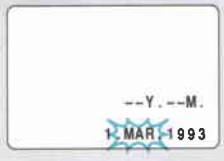
35-A



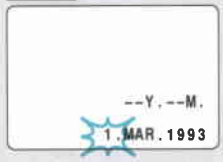
35-B



35-C



35-D



3. Press the + and – buttons to scan the year display. 35-A

- Press once to scan one year at a time.
- Press and hold to scan the years quickly.
- Press the – button to scan the display in reverse order.
- You cannot set future years.
  Only years from the current year back to 99 years ago can be set.

↻ 1895 ↔ 1896 ↔ ••••• ↔ 1992 ↔ 1993 ↔ 1994 ↺

4. Press the SHIFT button when the correct year is shown.

- The year is set and the month display flashes. 35-B

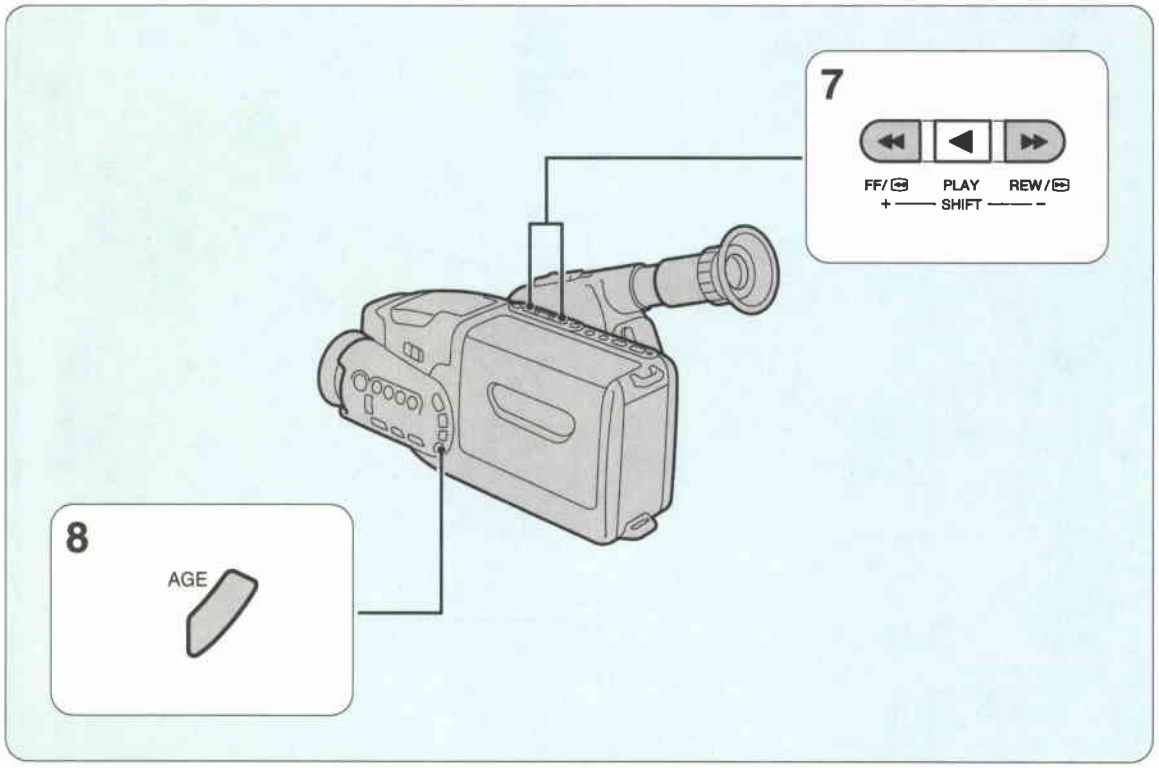
5. Press the + and – buttons to scan the month display. 35-C

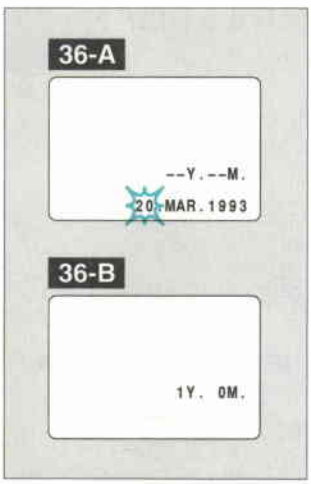
↻ JAN ↔ FEB ↔ ••••• ↔ OCT ↔ NOV ↔ DEC ↺

6. Press the SHIFT button when the correct month is shown.

- The month is set and the day display flashes. 35-D

(continued on next page)





7. Press the + and – buttons to scan the day display.

36-A

- The camera knows the number of days in each month and which years are leap years.

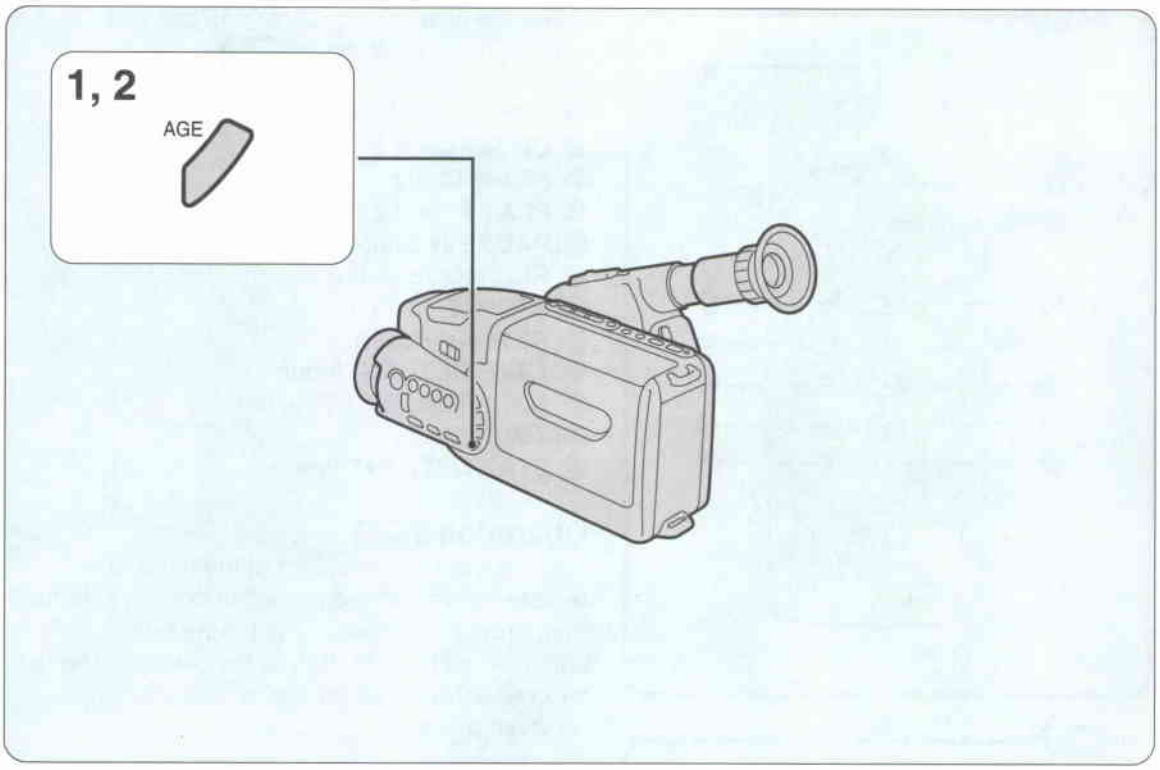
↻ 1 ↔ 2 ↔ 3 ↔ 4 ↔ 5 ↔ • • • • • ↔ 27 ↔ 28 ↔ 29 ↔ 30 ↔ 31 ↺

8. Press the AGE button when the correct day is shown.

- The date display disappears.
- The age is automatically calculated and displayed in the viewfinder. 36-B
- Press the AGE button again to make the display disappear from the viewfinder.

Notes:

- The birthday cannot be set during recording or playback.
- If you change or remove the lithium battery without a power source attached, the birthday is cleared from memory.



37-A

1Y. 0M.

Recording an Age

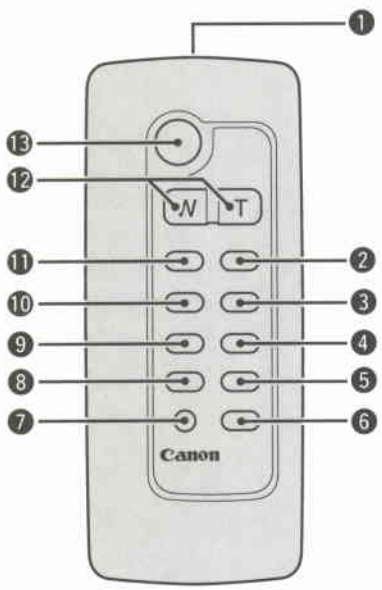
1. While recording or in record pause mode, press the AGE button.

- The age appears in the viewfinder and is recorded with the scene. 37-A
- The age can also be recorded with the date and time and/or titles.

2. Press the AGE button again to end age recording.

WL-52 Wireless Controller

38-A



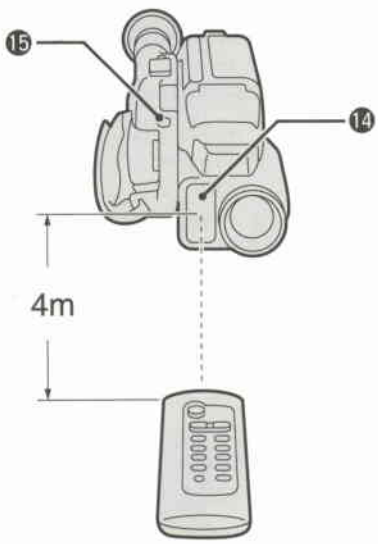
Using the wireless controller you can operate the camera from a distance. 38-A

❶ Transmitter
❷ **F.** (Fade) **START/STOP** Button
❸ **ON SCREEN** Button
❹ **FF** ▶▶ Button
❺ **PLAY** ▶ Button
❻ **PAUSE** ❚❚ Button
❼ **REC MODE** Button
❽ **STOP** ■ Button
❾ **REW** ◀◀ Button
❿ **TAPE RETURN** Button
⓫ **COUNTER RESET** Button
⓬ **ZOOM** Buttons
⓭ **START/STOP** Button

Operation 38-B

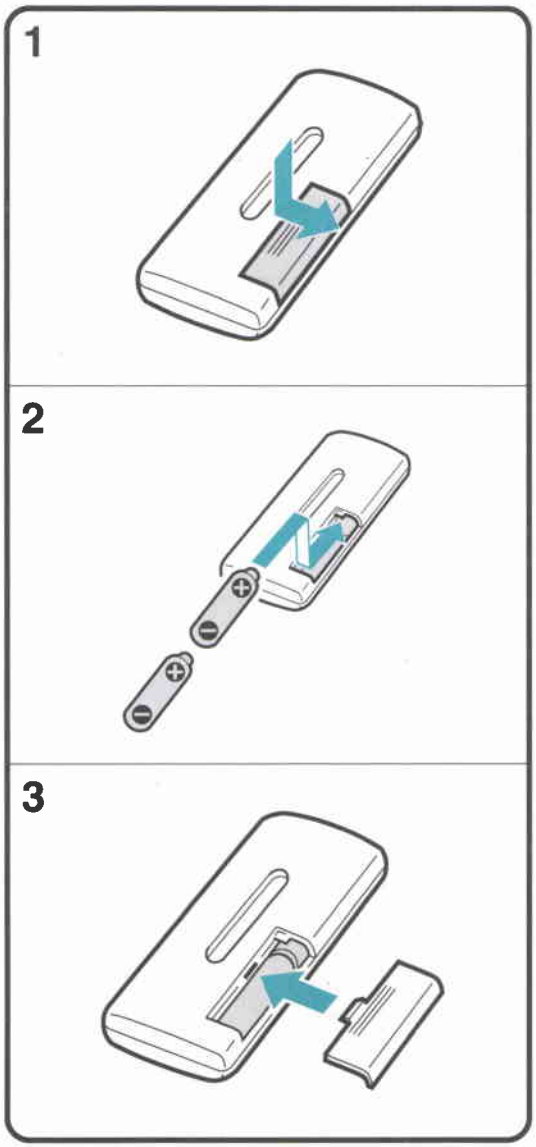
Aim the wireless controller at the camera's remote sensor ⓮ and press the control buttons to operate the camera. Use the wireless controller within 4 metres of the camera. The tally lamp ⓯ lights up when the remote sensor receives a signal.

38-B



Notes:

- When using the wireless controller, check that it lights up the tally lamp. If the tally lamp lights, the wireless controller can be used from that position.
- If you are too close to the camera when operating the wireless controller, the camera may not respond to the wireless controller's signal.



Inserting Batteries into Wireless Controller

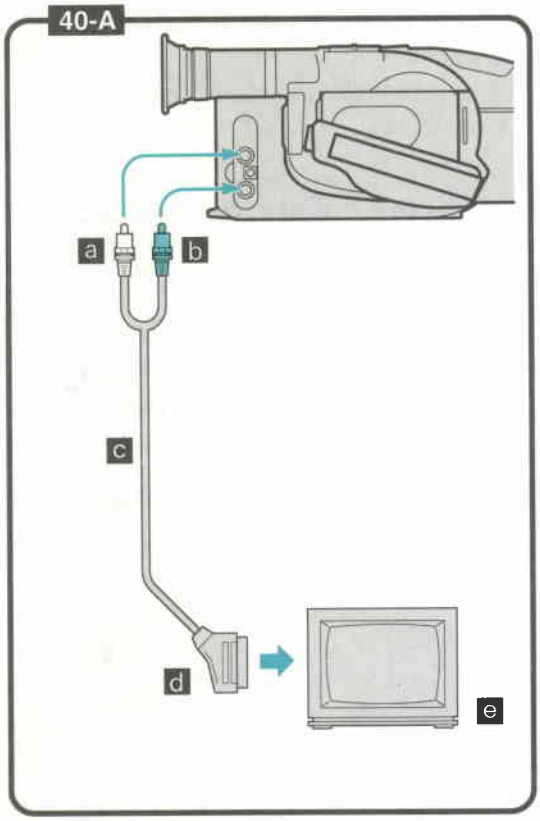
The wireless controller operates on two R03/AAA batteries.

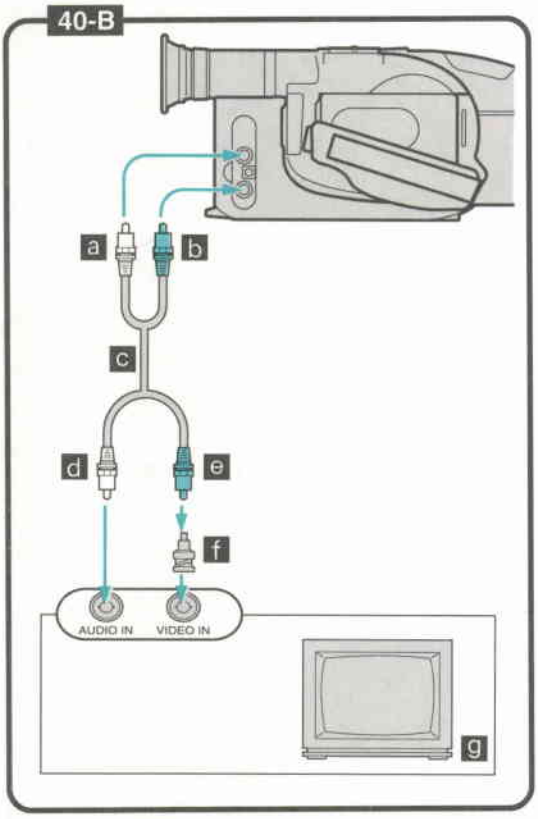
1. **Remove the cover from the back by pressing down and sliding in the direction of the arrow.**
2. **Insert two R03/AAA batteries following the ⊕ and ⊖ markings. Be careful not to reverse the polarity of the batteries.**
3. **Slide the cover back into place.**

Notes:

- Autofocus function stops when remote sensor receives a signal from wireless controller.
- The wireless controller uses infrared beams to transmit signals, so sunlight or fluorescent light on the remote sensor may shorten operating distance.

Playback Connection





- To play back a cassette on a TV, use the DC-100 DC Coupler together with the CA-100 Compact Power Adapter or the BP-E77K Battery Pack as a power source.
- Playback connection depends on whether or not the TV is equipped with a SCART terminal or audio/video input terminals.

Using a TV (or VCR) with a SCART Terminal

Connection Procedure 40-A

You need the PC-150 SCART Cable.

a To Audio Output Terminal (black)
b To Video Output Terminal (yellow)
c PC-150 SCART Cable
d To SCART Terminal
e TV

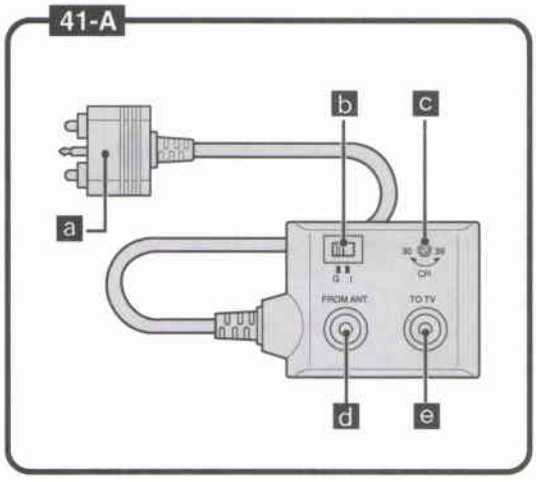
Using a TV (or VCR) with Audio/ Video Input Terminals

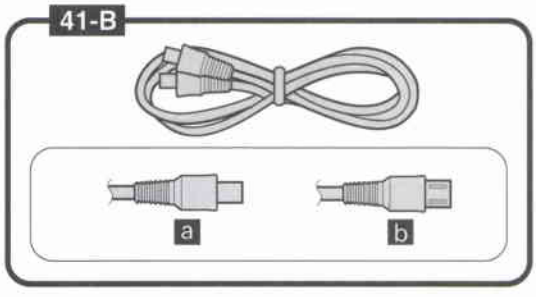
Connection Procedure 40-B

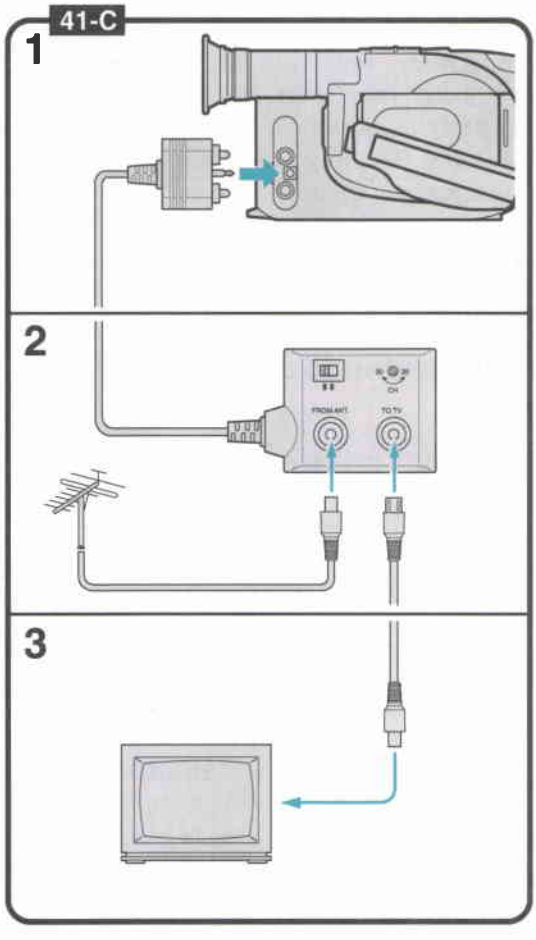
You need the optional C-150 AV Cable.

a To Audio Output Terminal (black)
b To Video Output Terminal (yellow)
c C-150 (video=yellow, audio=white or black)
d To Audio Input Terminal
e To Video Input Terminal
f BNC Adapter*
g TV: Set the TV/VIDEO selector to VIDEO

* For a TV or VCR which has a BNC-type video input terminal, use a commercially available BNC plug adapter for connection.







Using a TV without Audio/ Video Input Terminals

The optional RU-100 RF Unit is required in order to view cassettes on a TV which does not have audio/video input terminals. There are two RU-100 models, one for Europe and one for Australia. The connection and setting procedures for the two models differ.

European Model

RU-100 41-A

- a Connection Plug
- b G/I Selector
- c Video Channel Selector
- d FROM ANT. Terminal
- e TO TV Terminal

Coaxial Cable with DIN-Connectors 41-B

- a male
- b female

Connection Procedure 41-C

1. Connect the RF Unit to the camera.

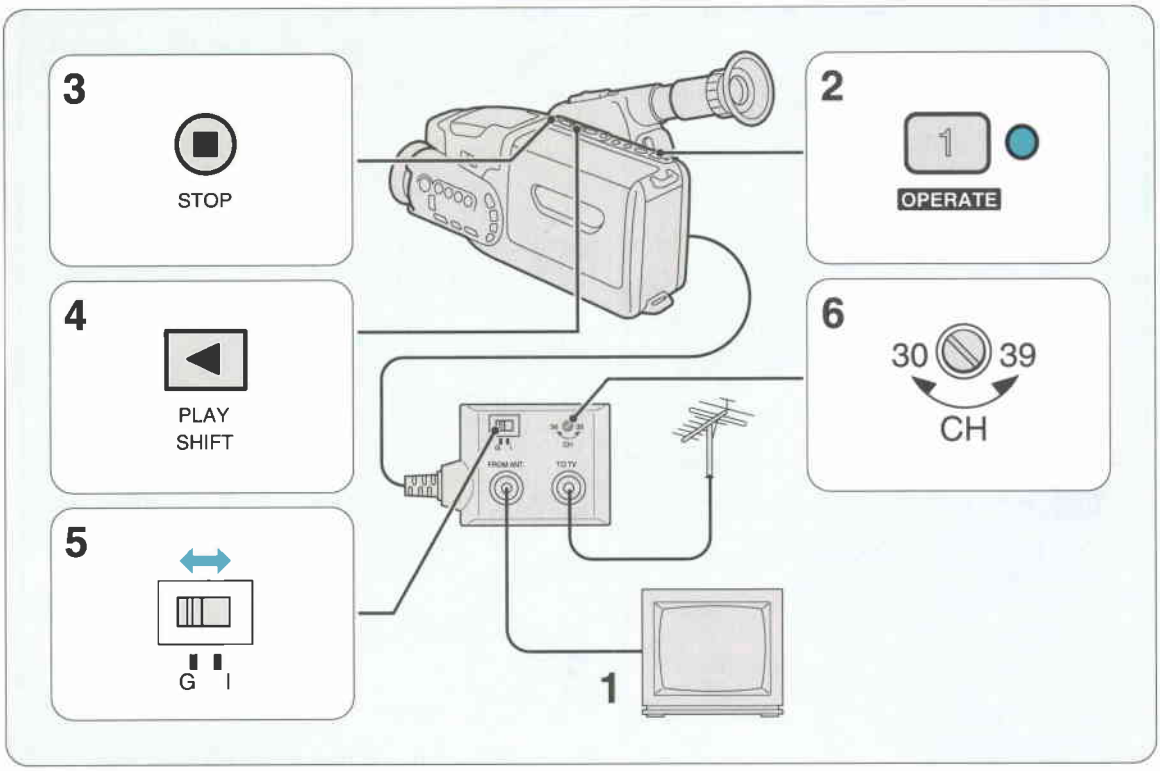
2. Attach the aerial cable to the FROM ANT. terminal, and connect the female connector to the TO TV terminal of the RF unit.

- Please note the difference between 'male' and 'female' type DIN-connectors on the coaxial cable.

3. Connect the male connector to the aerial input terminal of the TV.

To View a Regular TV Programme

The RU-100 RF Unit has an automatic signal selector which selects the signal from the video camera whenever the camera is connected to the RF unit and the power is turned on. To view a regular TV programme, turn the camera off or disconnect it from the RF unit.



Selecting the Video Channel (European model)

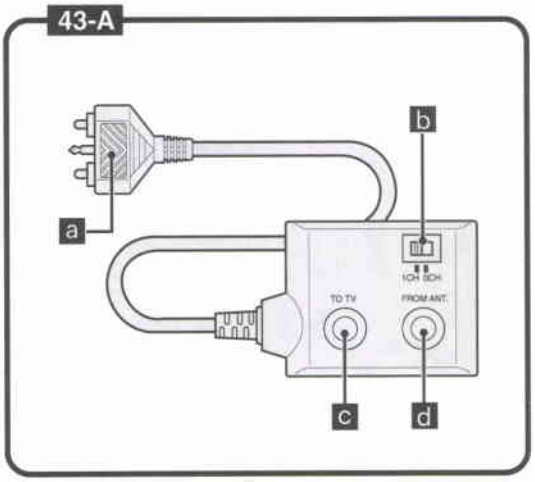
The video channel means the channel in your area which is not used by a broadcasting station (channel 30–39). If your TV does not have audio/video input terminals, your TV set and the video channel selector of the RU-100 RF Unit must be set to the video channel in order to view playback.

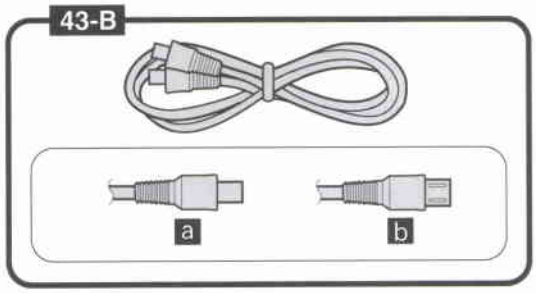
1. **Turn the TV on.**
2. **Turn the camera on.**
3. **Press the ■ (STOP) button to select playback mode.**
4. **Press the ◀ (PLAY) button to start playback.**
5. **Set the RF unit's G/I selector using flat-edge screwdriver.**

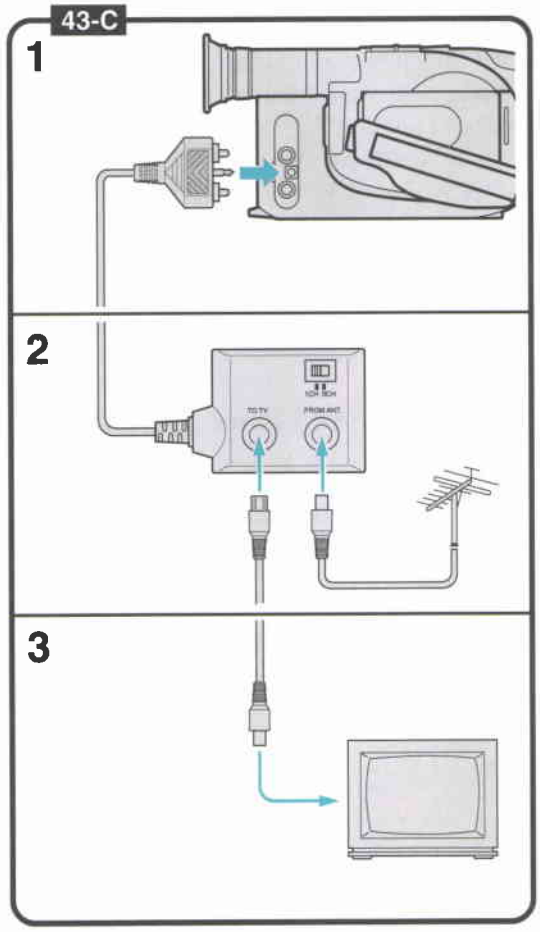
   I : England, South Africa, Hong Kong
   G : Continental Europe

   • If the G/I selector is not set properly, the picture will appear, but no sound will be heard.
6. **Set the TV and the video channel selector to the video channel (the video channel selector is factory-set to CH 32).**

   • For example, if the video channel in your area is channel 33, tune the TV to channel 33, then use a flat-edge screwdriver to set the video channel selector of the RU-100 to CH 33. Adjust it by turning until the picture is clear.







Australian Model

RU-100 43-A

- a Connection Plug
- b Video Channel Selector
- c TO TV Terminal
- d FROM ANT. Terminal

Coaxial Cable with DIN-connectors 43-B

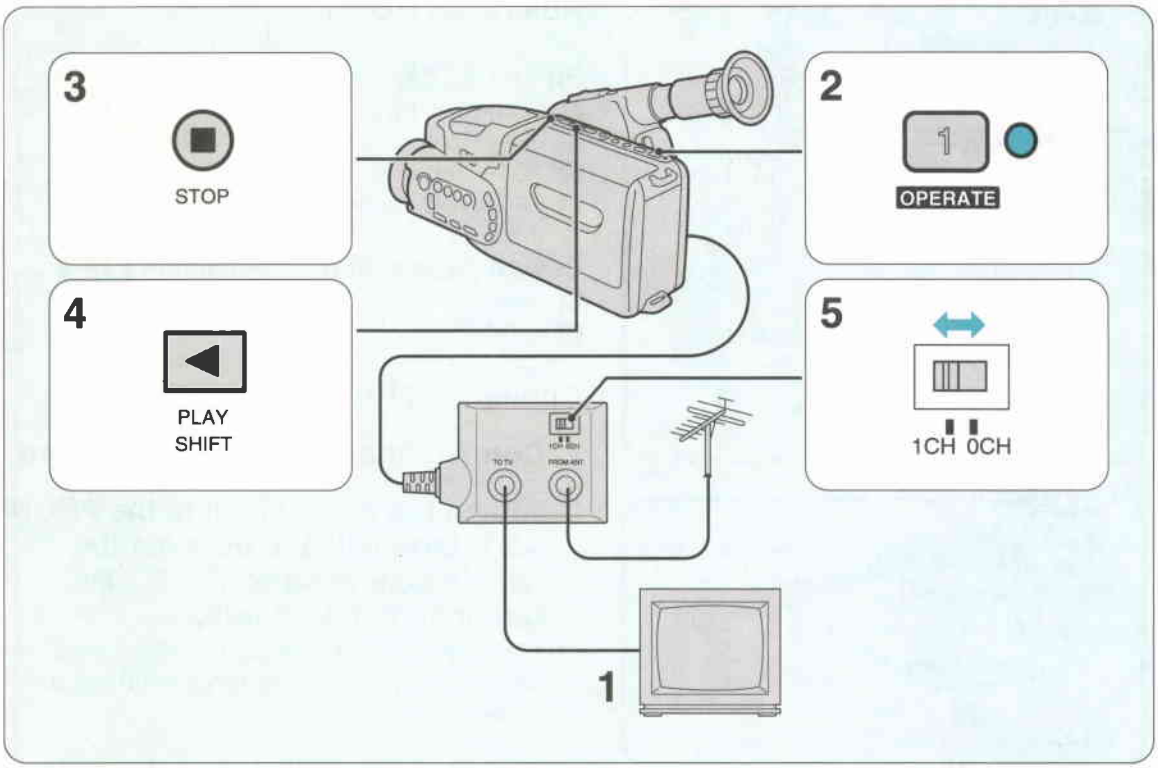
- a male
- b female

Connection Procedure 43-C

1. **Connect the RF Unit to the camera.**
2. **Attach the aerial cable to the FROM ANT. terminal, and connect the female connector to the TO TV terminal of the RF unit.**
   - Please note the difference between 'male' and 'female' type DIN-connectors on the coaxial cable.
3. **Connect the male connector to the aerial input terminal of the TV.**

To View a Regular TV Programme

The RU-100 RF Unit has an automatic signal selector which selects the signal from the video camera whenever the camera is connected to the RF unit and the power is turned on. To view a regular TV programme, turn the camera off or disconnect it from the RF unit.

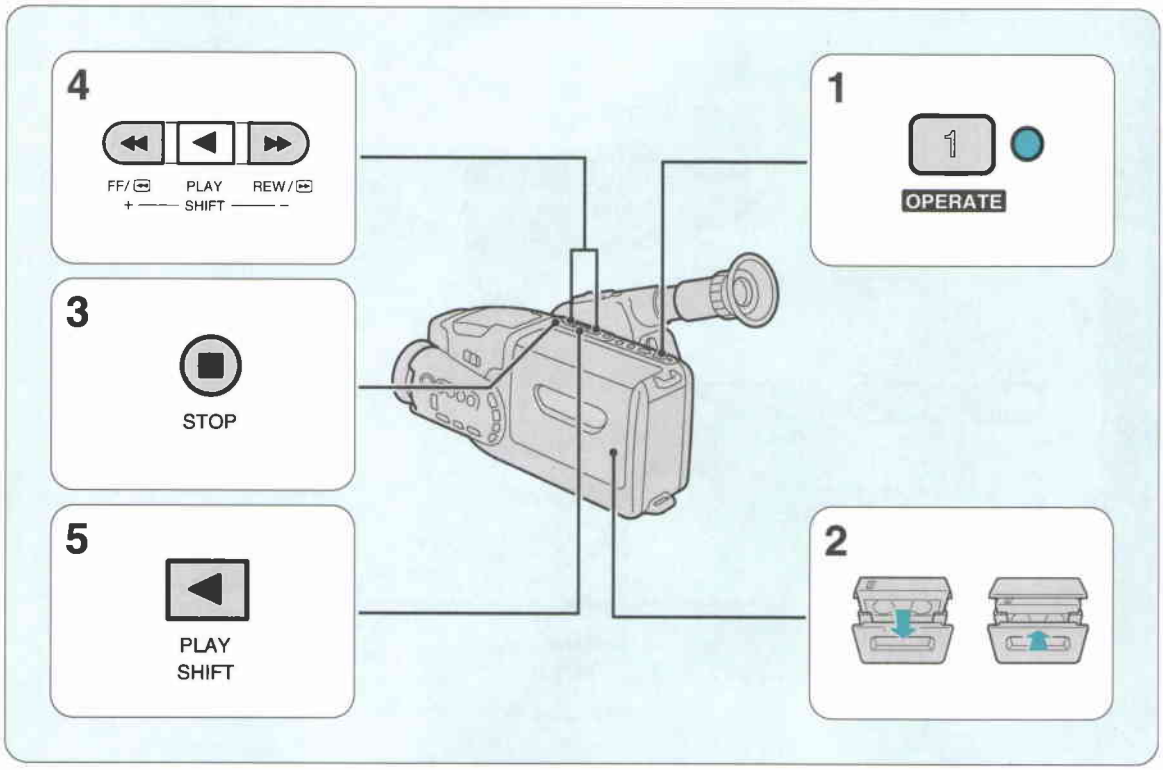


Selecting the Video Channel (Australian model)

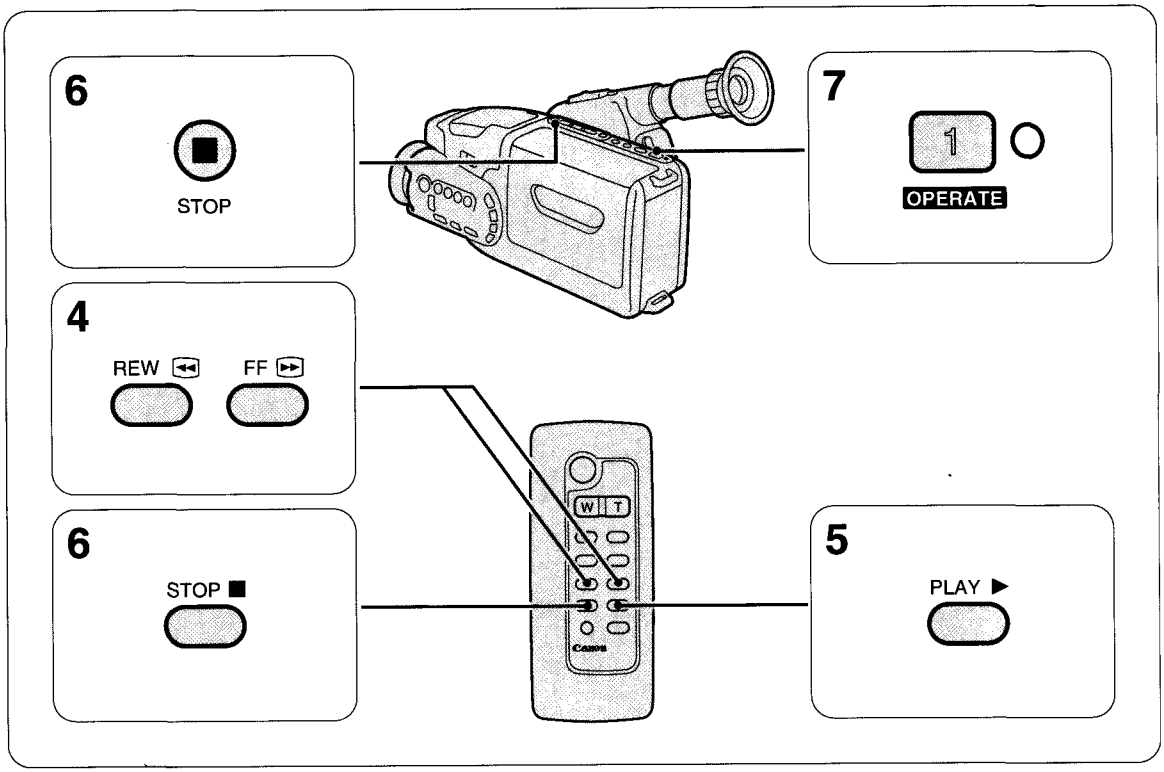
The video channel means the channel in your area which is not used by a broadcasting station, and can be used for playback of video cassettes (channel 0 or 1). If your TV does not have audio/video input terminals, your TV and the video channel selector of the RU-100 RF Unit must be set to the video channel in order to view playback.

1. **Turn the TV on.**
2. **Turn the camera on.**
3. **Press the ■ (STOP) button to select playback mode.**
4. **Press the ◀ (PLAY) button to start playback.**
5. **Set the TV and the video channel selector to the video channel (the video channel selector is factory-set to 1CH) using a flat-edge screwdriver.**
   - For example, if the video channel in your area is channel 0, set the video channel selector of the RU-100 to 0 CH, then tune the TV to channel 0.

Playback Procedure



1. **Turn the camera on.**
   - The OPERATE indicator lights up.
2. **Load the cassette.**
   - See p. 23 for loading/unloading cassettes.
3. **Press the ■ (STOP) button to select playback mode.**
   - Playback functions will not operate if you have not pressed the ■ (STOP) button.
4. **Locate the playback start point.**
   - Use the REW or FF buttons to locate the start point or use high-speed search (see p. 48).
5. **Press the PLAY button to start playback.**
   - You can also monitor playback in the viewfinder.



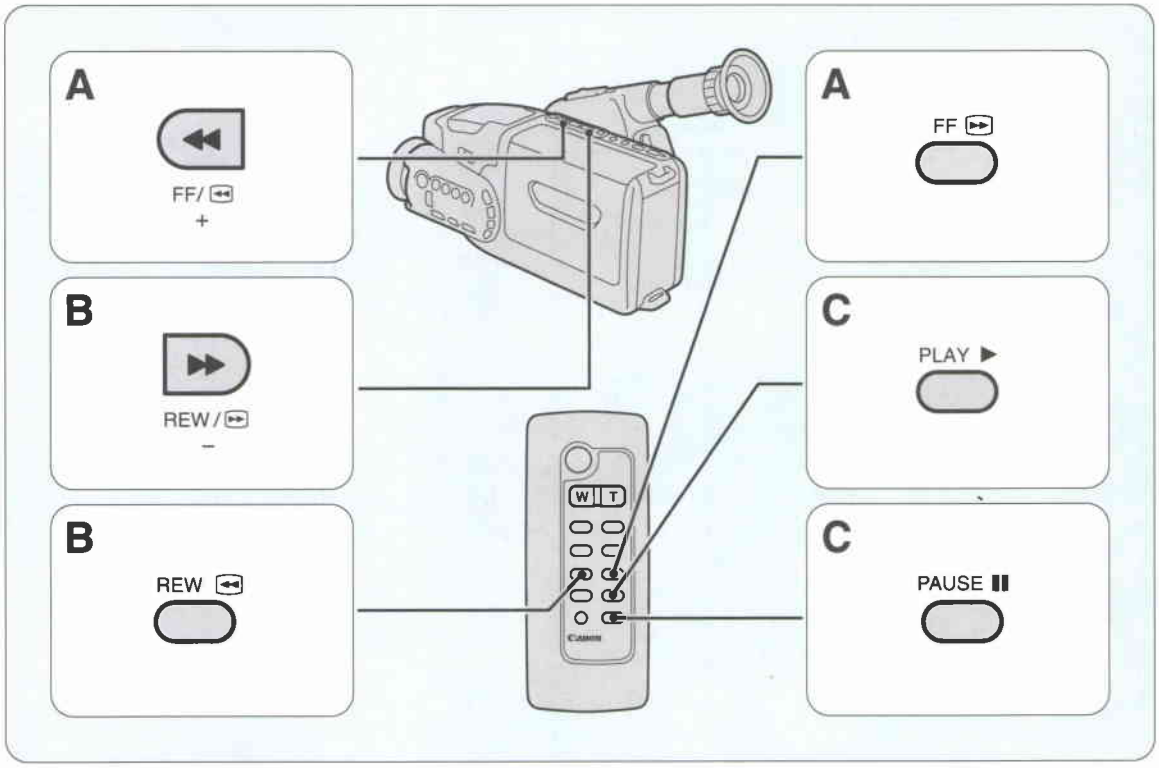
6. Press the ■ (STOP) button to end playback.

7. Turn the camera off.

- The OPERATE indicator goes off.

High-Frequency Feedback

- High-frequency feedback may occur if the camera microphone is too close to the TV speaker during recording or record pause mode. Lower the TV volume.



Special Playback Methods

In addition to normal playback, your camera also has fast forward, rewind and still playback, plus high-speed search.
Playback is controlled by pressing buttons on the camera or by using the wireless controller.

A. Fast Forward Playback

Press and hold the FF button during normal playback to view scenes at 9 times normal speed.

- Release the FF button to resume normal playback.

B. Rewind Playback

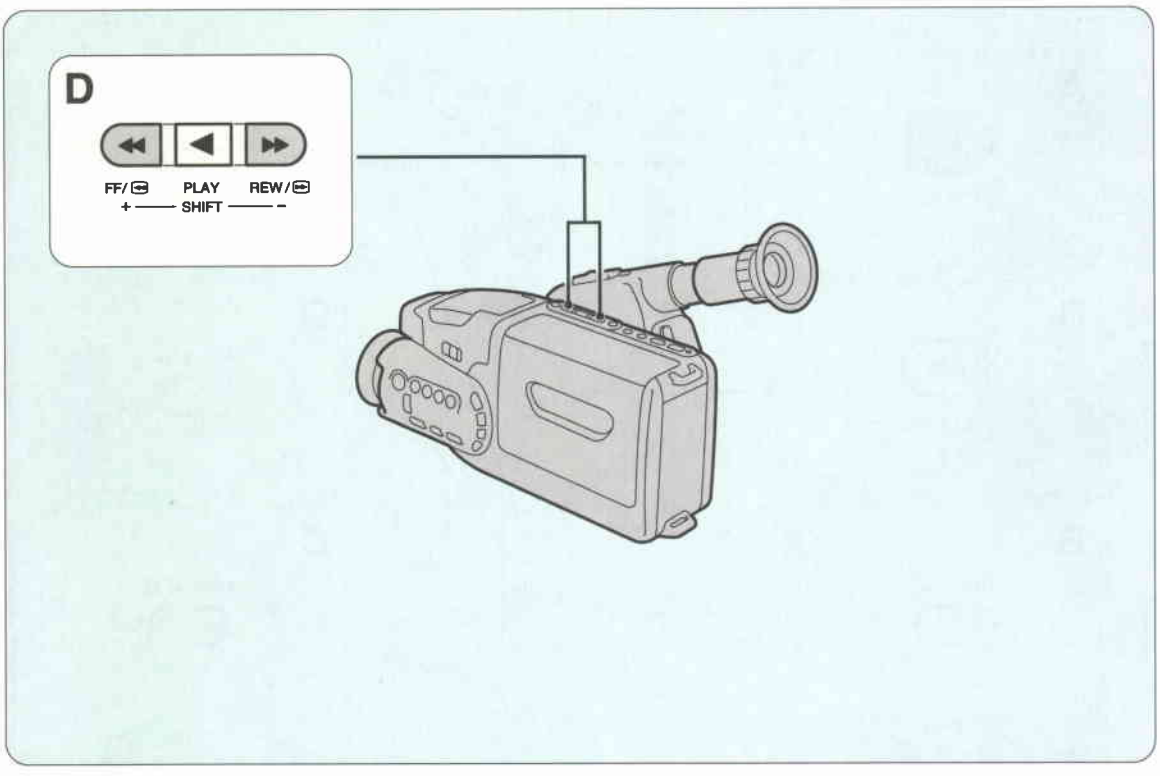
Press and hold the REW button during normal playback to view scenes in reverse at 7 times normal speed.

- Release the REW button to resume normal playback.

C. Still Playback

Press the PAUSE button on the wireless controller during normal playback to pause the picture. Press the PAUSE button again or the PLAY button to resume normal playback.

- The camera's start/stop button can also be used.



D. High-Speed Search

Press and hold the FF button during normal fast forward mode to view scenes at approximately 15 times (SP) or 30 times (LP) normal speed. Release the FF button to resume normal fast forward.

Press and hold the REW button during normal rewind mode to view scenes in reverse at approximately 15 times (SP) or 30 times (LP) normal speed. Release the REW button to resume normal rewind.

49-A

49-B

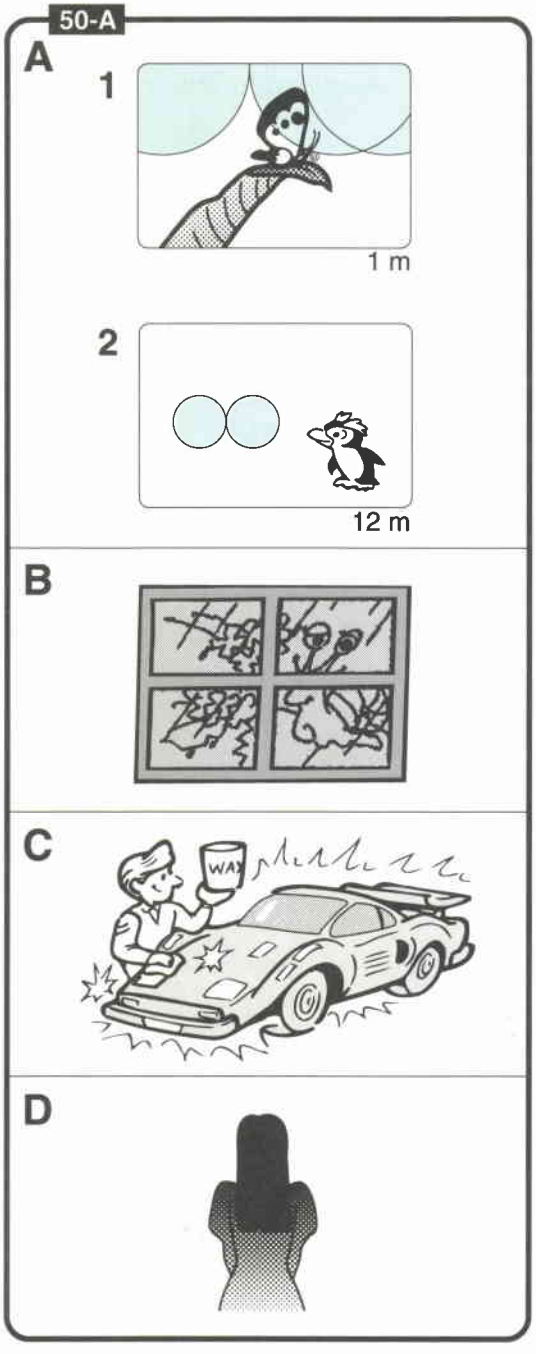
Notes:

- Several noise bars appear during special playback.

  49-A During fast forward and rewind playback modes.

  49-B During still playback.
- The audio portion of the tape cannot be heard during special playback.
- The camera automatically goes into stop mode after more than seven minutes of continuous still playback.
- The picture flickers a little during still playback.
- When fast action scenes are shown during still playback, the picture may blur.
- Certain TVs may show the special playback picture in black and white, or the picture may roll or divide.
- Notes about special playback of tapes recorded in SP:
  (1) The still playback picture will contain much more noise than on tapes recorded in LP.
  (2) During fast forward or rewind playback, noise bars will be much wider than on tapes recorded in LP.
- The high-speed search picture might not appear on some TVs.

Focusing



There are two different ways of focusing: autofocus and manual focus.

Autofocus

The camera can adjust the focus automatically by bouncing infrared beams off the subject to work out how far away it is.
As soon as you turn the camera on, autofocus starts operating. Focus adjusts automatically to suit the subject located in the centre of the viewfinder.
In some cases, however, you will probably get better results using manual focus.

Subject Not Suitable for Autofocus

50-A

A. The camera may not be able to focus on a subject in the centre of the viewfinder during telephoto-end recording of:

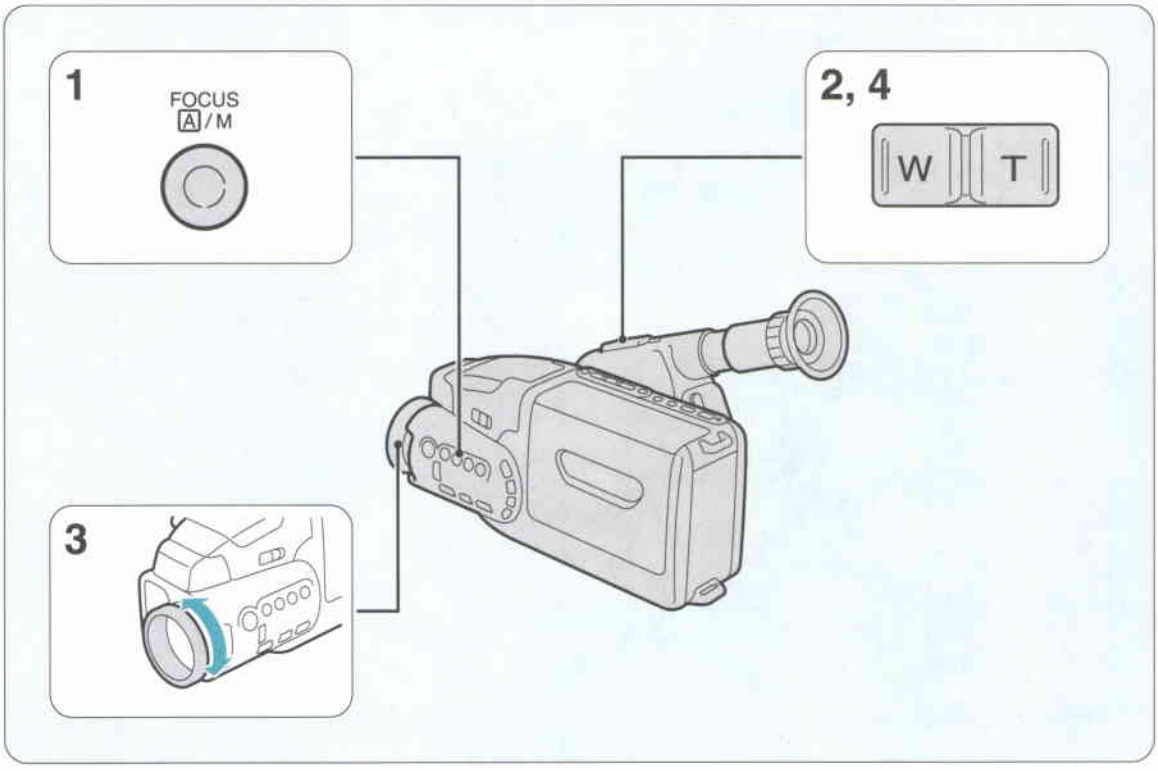
1. Very close subjects (closer than about 1 metre)
2. Distant subjects (further than about 12 metres)

□ indicates the target area covered by the camera's infrared beams.

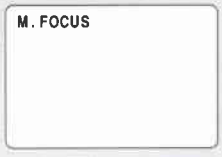
B. Subject behind glass
C. Subjects which reflect too much light (such as a shiny car)
D. Subjects which do not reflect enough light (such as water surfaces or black clothes)

Notes:

- The autofocus mechanism focuses on subjects at a distance of 0.6–12 metres. For more distant subjects the focus locks at approx. 50 metres — this works well in bright conditions, but in dim light manual focus may give better results.
- Be careful not to cover the autofocus window with your hand while recording.
- Do not touch the focusing ring during autofocus.
- Autofocus turns off while the camcorder is receiving signals from the wireless controller, but infrared signals from other wireless controllers being operated nearby may cause a temporary malfunction.



51-A



Manual Focus

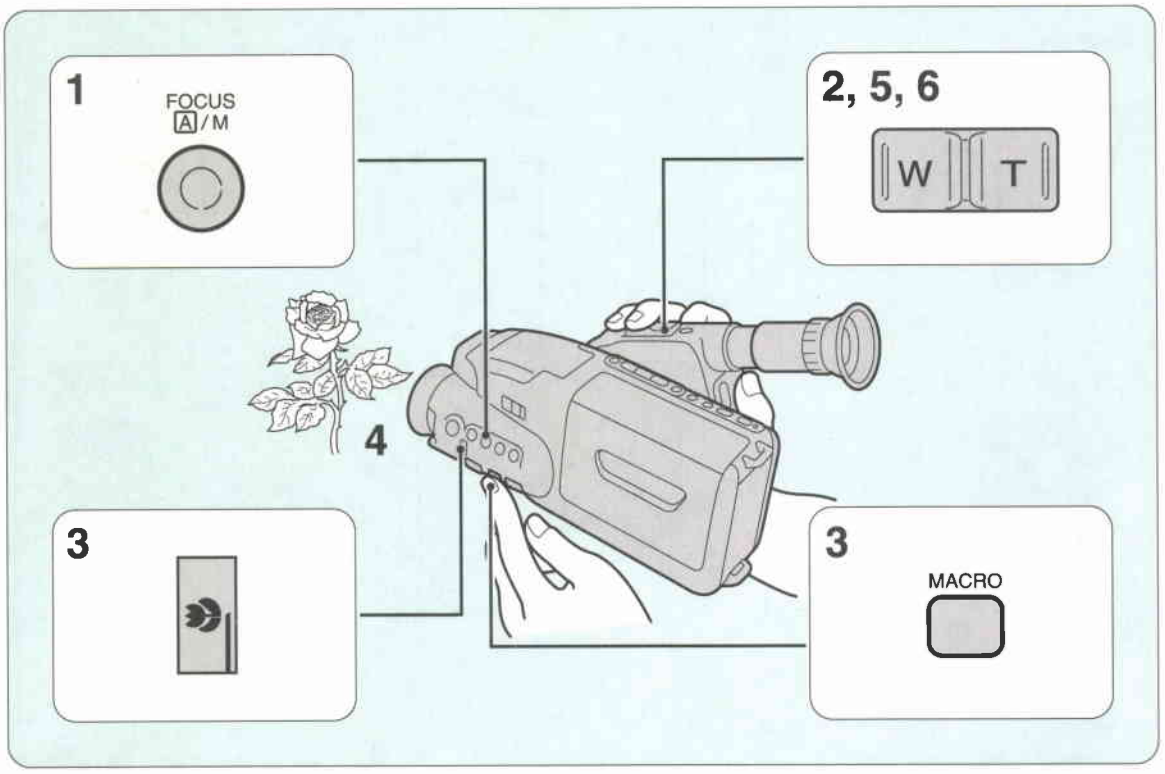
Use manual focus when you shoot subjects not suitable for autofocus.

1. **Press the FOCUS A/M button to select manual focus.**
   - "M. FOCUS" appears in the viewfinder. 51-A
2. **Press the T button to zoom into the telephoto end.**
3. **Look through the viewfinder and rotate the focusing ring to focus on the subject.**
4. **Use the zoom buttons to frame the subject properly.**
   - The camera automatically returns to autofocus after being turned off or placed in playback mode.
   - Press the FOCUS A/M button to stop manual focus and return to autofocus ("M. FOCUS" disappears from the viewfinder).

Focus Lock

When you press the FOCUS A/M button during autofocus, the focus can be locked on the subject focused at that time, even if the subject moves to the right or left of centre. To focus on another subject, adjust with the focusing ring or press the FOCUS A/M button again to return to autofocus.

Macro Recording



52-A

M. FOCUS

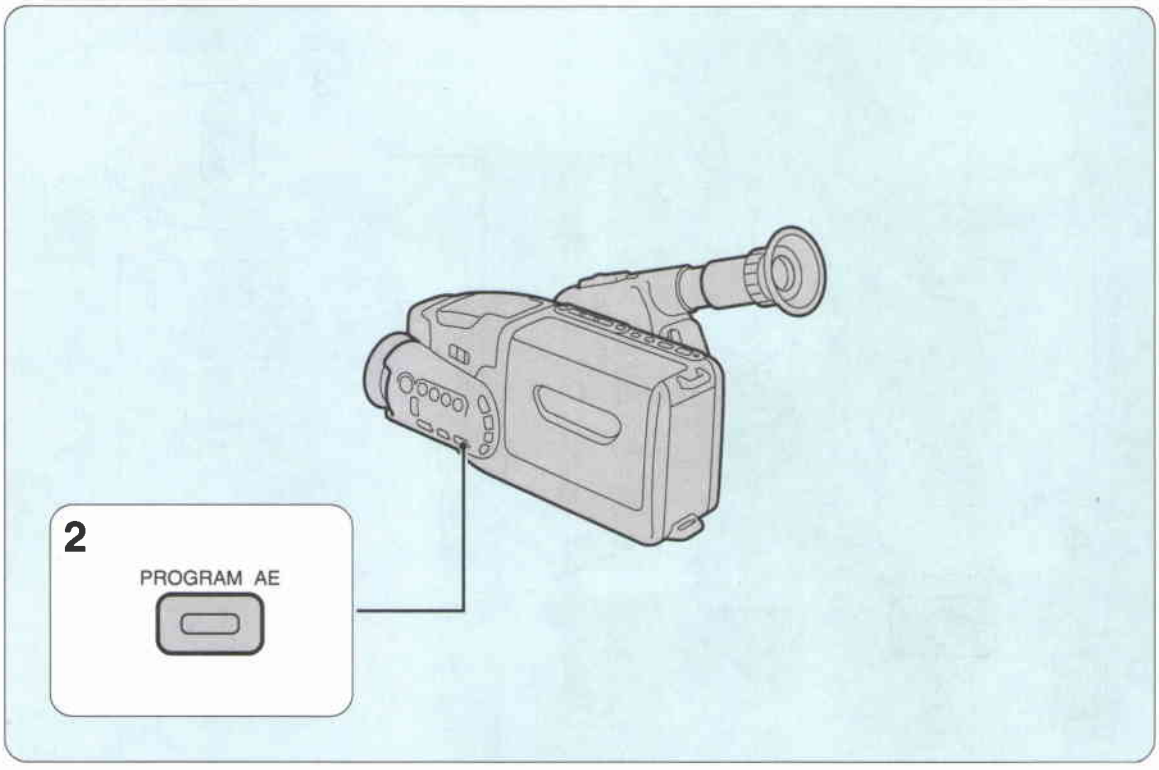
Macro recording allows you to record small subjects such as flowers and insects close-up, to full screen, and achieve extremely fine detail in your pictures.

1. **Press the FOCUS A/M button to select manual focus.**
   - "M. FOCUS" appears in the viewfinder. 52-A
2. **Press the W button to zoom into the wide-angle end.**
3. **Hold the MACRO button down and press the W button to enter macro range.**
   - mark appears in the zoom window.
4. **Approach the subject until it reaches the desired size in the viewfinder.**
   - Be sure there is adequate lighting.
   - You can approach the subject as close as 4 mm.
5. **Use the T/W button within macro range for fine focusing.**
6. **When macro recording is complete, press the T button to exit macro range.**

Notes:

- Move the camera forward or backward slightly to change the subject image size and then fine focus again.
- A tripod is recommended for better recording stability.
- If necessary, remove the lens hood (see p. 26).

Program AE



Program AE allows you to use advanced recording techniques easily.
There are three different Program AE modes in addition to auto mode, to help you achieve the best recording results.

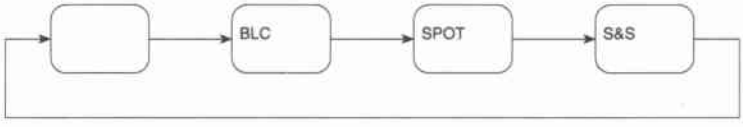
How to Use Program AE

1. Place the camera in record pause mode.

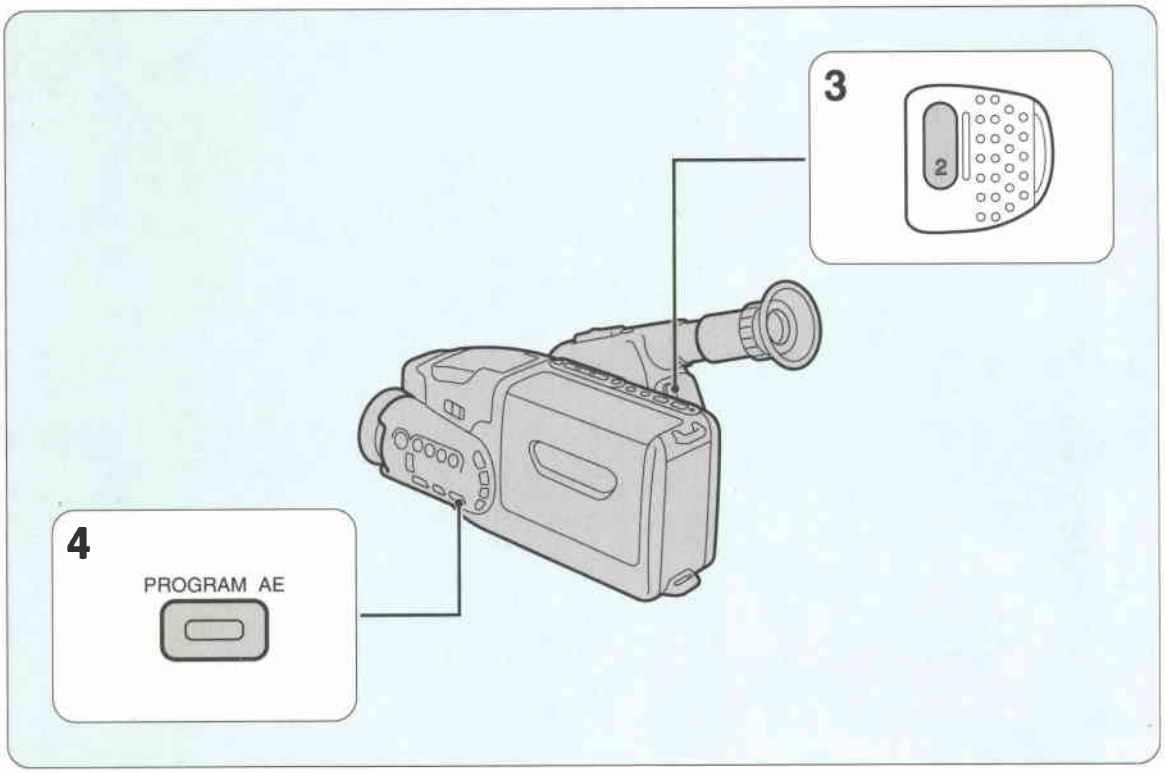
- The camera automatically enters auto mode.

2. Press the PROGRAM AE button.

- Each time the button is pressed, the viewfinder display changes as follows:



No display : Auto mode (normal recording)
BLC (Backlight Compensation): To record a backlit subject
SPOT: To record a spotlit scene
S & S (Sand & Snow): To record a bright scene



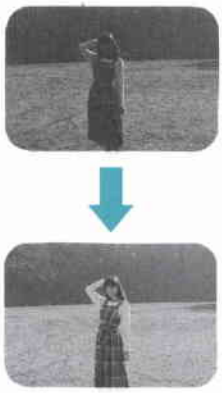
3. Make your recording.

4. When recording is complete, press the PROGRAM AE button to return to auto mode.

Notes:

- When switching modes using the PROGRAM AE button, image brightness may change suddenly. Switch modes in record pause mode.
- When recording bright lights or reflections, a smear effect may occur.
- Flicker may occur with some sources of illumination.
- When using Program AE, except in auto mode, the High-Speed Shutter cannot be used.
- The Program AE setting is cancelled when you turn the camera off.

55-A



To Record a Backlit Subject (Backlight Compensation) 55-A

Backlighting, caused for example by the sun or an open window behind the subject, will make the subject appear underexposed. Use this function when the subject appears underexposed in the viewfinder.

Press the PROGRAM AE button to select "BLC."

Note:

- If the picture angle is altered during backlight compensation, the exposure may become unsuitable. The image in the viewfinder should always be checked and compensation used only when the subject appears underexposed.

55-B

To Record a Spotlit Scene 55-B

In SPOT mode, the iris is automatically adjusted for effective, glare-free recordings of scenes illuminated by spotlights or other concentrated light sources.
Use this mode when recording spotlit scenes such as on a stage.

Press the PROGRAM AE button to select "SPOT."

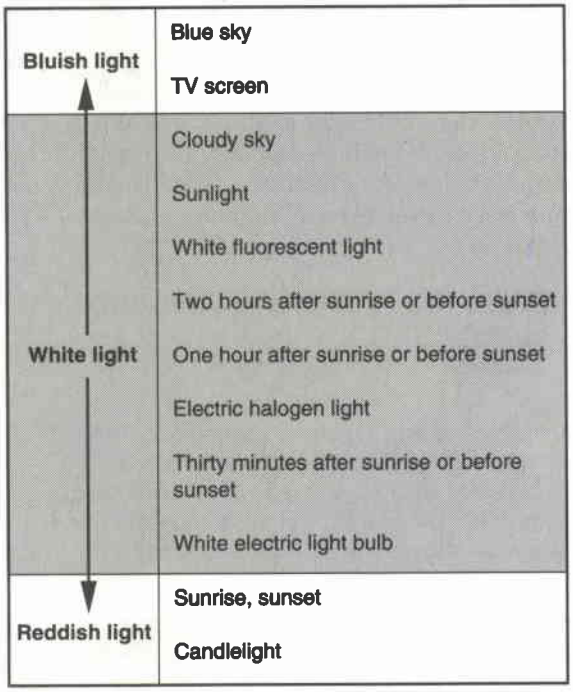
55-C

To Record a Bright Scene (Beach or Snowy Location) 55-C

In S & S (Sand and Snow) mode, the shutter speed and iris are automatically adjusted for clear recordings. Subjects with excessively bright backgrounds, such as a summer beach or snowy ski resort, are not underexposed.
Use this mode in locations with strong light reflection to obtain clear recordings and optimum exposure of the subject.

Press the PROGRAM AE button to select "S&S."

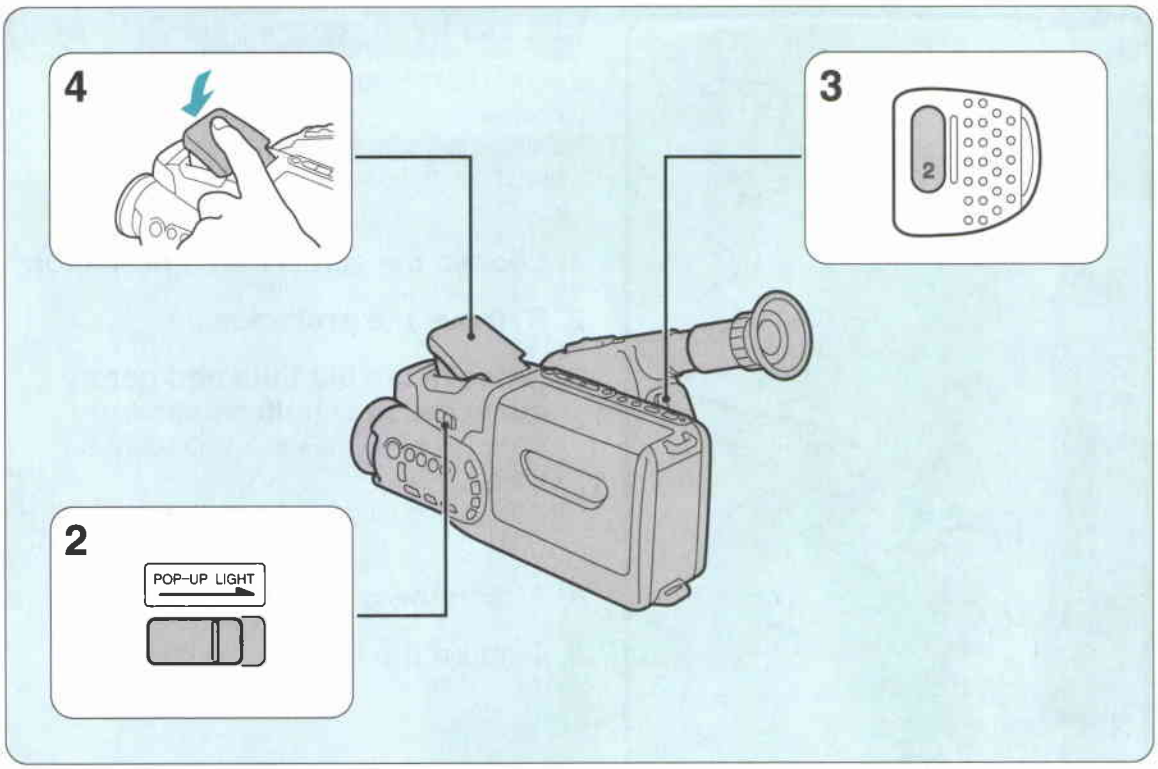
White Balance

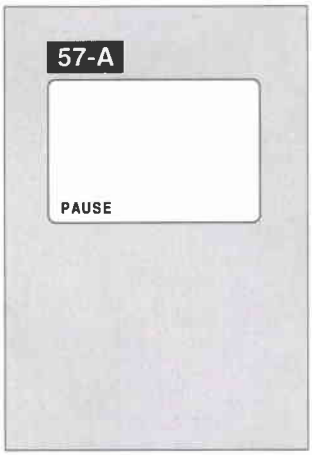


■ indicates the operating range of auto white balance

The camcorder's auto white balance system compensates for a wide range of lighting conditions so that colours are recorded naturally and whites really look white. (Colours may vary slightly depending on the light source.)

Shooting with Pop-up Light





When shooting in a dark place, use the pop-up light.

- Use the pop-up light within approximately 2 metres of the subject to ensure a clear picture.

1. Place the camera in record pause mode. 57-A

2. Slide the POP-UP LIGHT switch.

- The light pops up and turns on.

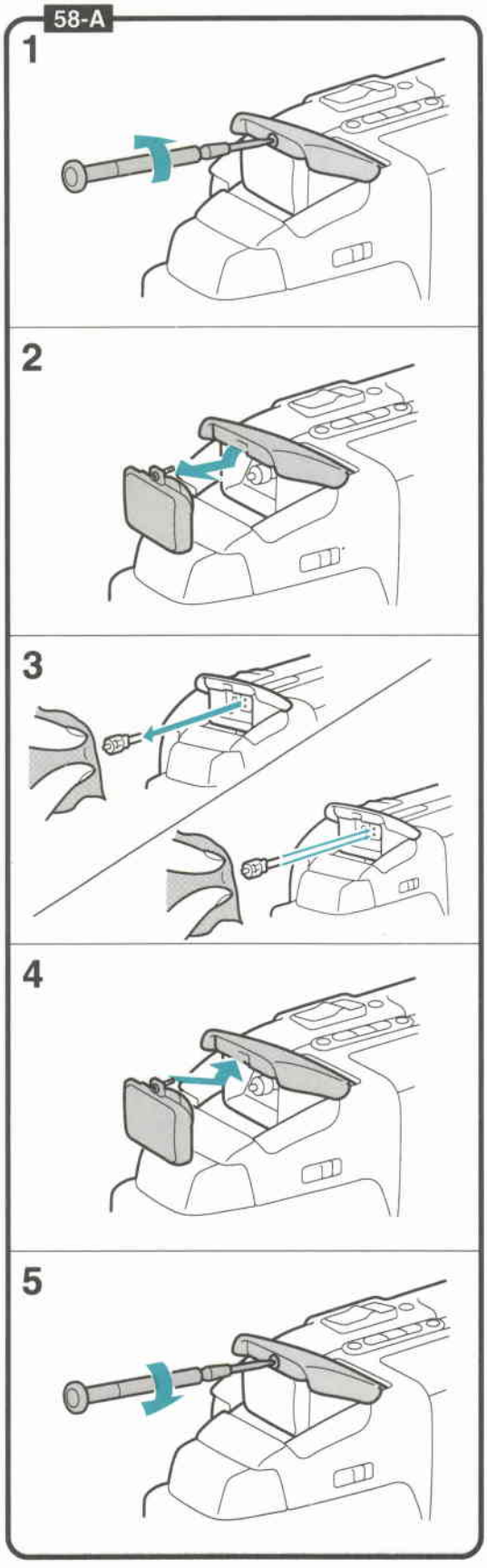
3. Make your recording.

4. When recording is complete, push the pop-up light down.

- The pop-up light turns off.

Note:

- The pop-up light will only turn on during recording or in record pause mode.
- Bear in mind that shooting with the pop-up light consumes more power (the BP-E77K Battery Pack will operate it for approximately 20 minutes).



Replacing Bulb 58-A

Use only Canon Halogen Bulb MHL-5.7 V 4 W (accessory).

- Before replacing the bulb, turn the power off and allow sufficient time for the bulb to cool.

1. Loosen the screw of the protector.

2. Remove the protector.

3. Remove the old bulb and gentry insert the new bulb as shown.

- Do not touch the new bulb with your bare hands.
- If the bulb is dirty, wipe it with a soft, clean cloth.

4. Attach the protector.

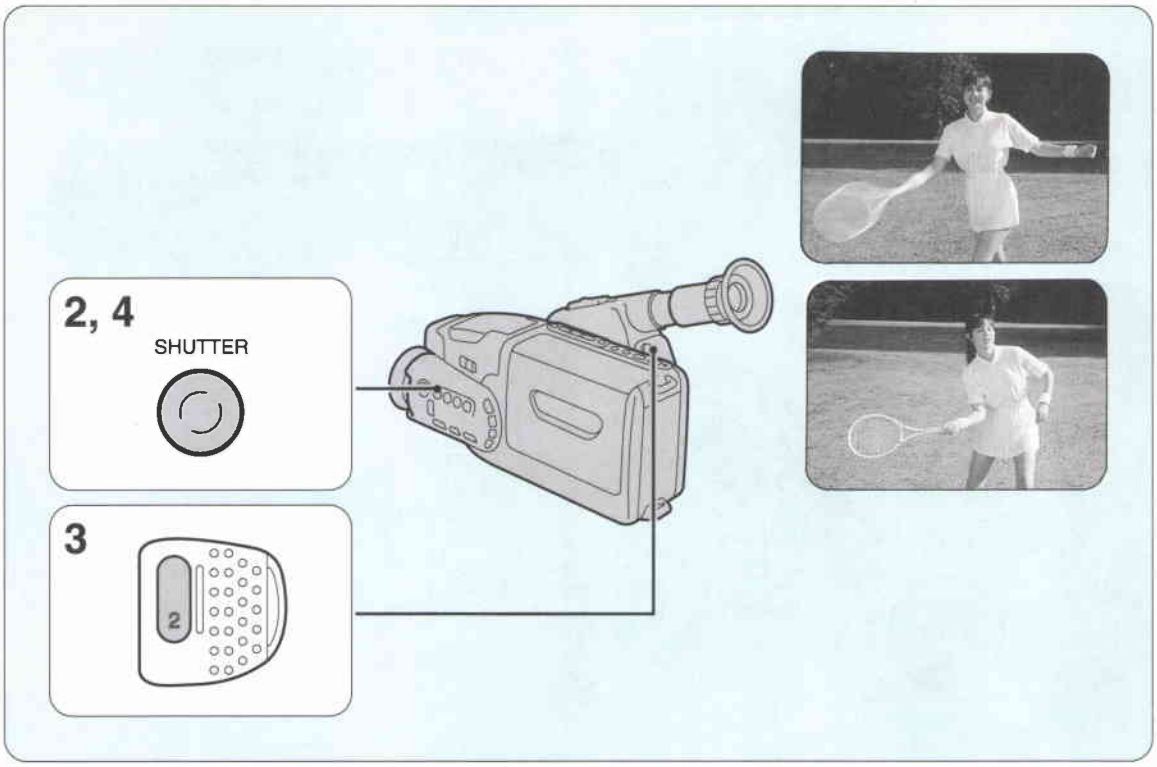
5. Tighten the screw.

Warning
Be careful not to touch the bulb during or immediately after use; it becomes very hot.

Notes:

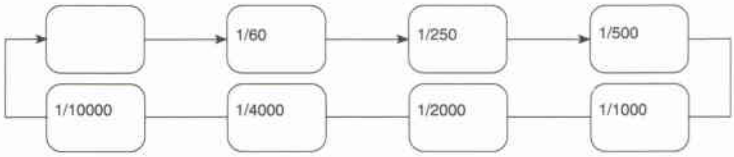
- Keep the hot lamp away from flammable or plastic materials.
- Protect the pop-up light from impact or vibration during use or the halogen lamp may burn out.

High-Speed Shutter



The high-speed shutter allows you to capture sports and other fast action scenes clearly. The camera has seven high-speed shutter settings: 1/60th, 1/250th, 1/500th, 1/1000th, 1/2000th, 1/4000th and 1/10000th of a second. Select the correct shutter speed according to subject speed and brightness. Normal shutter speed is 1/50th of a second.

1. **Point the camera at the subject and compose the scene in the viewfinder.**
2. **Press the SHUTTER button.**
   - Each time the button is pressed, the viewfinder display changes as follows:

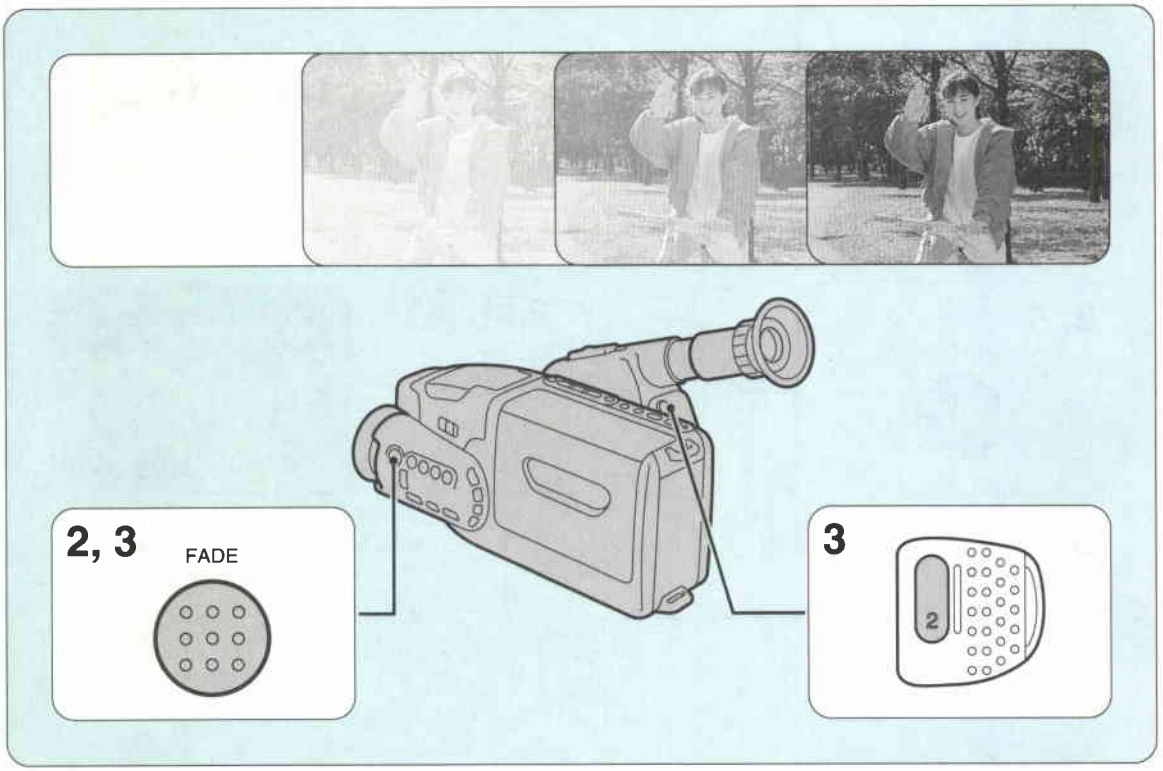


3. **Make your recording.**
4. **Press the SHUTTER button to return to normal shutter speed.**

Notes:

- Use this function outdoors in bright light.
- You cannot change the shutter speed when using Program AE.
- Scenes shot with the high-speed shutter will appear somewhat jerky during normal playback.
- Scenes shot with the high-speed shutter work best with special playback. Use a VCR capable of noise-free special playback for best results.
- If you turn off the power or switch to playback mode, the shutter setting automatically returns to normal (1/50).

Fade



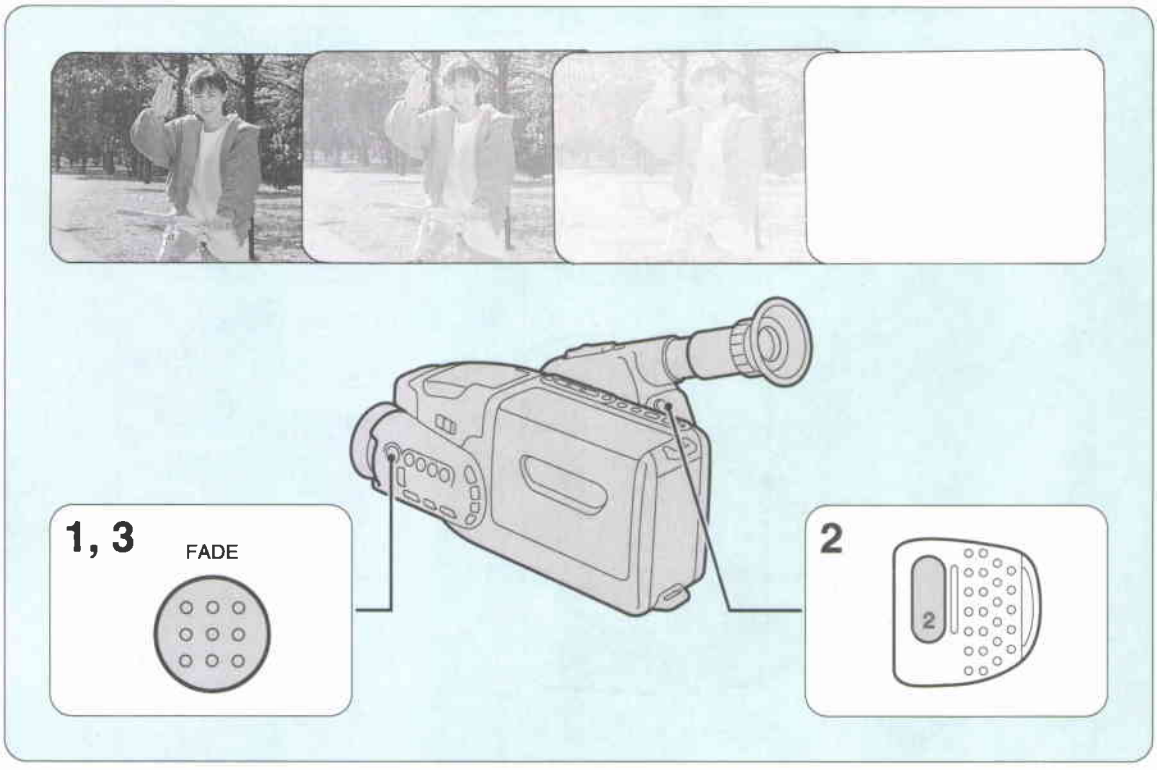
60-A

The fade effect allows you to make scenes gradually appear or disappear in smooth transition.

Fade In

The scene gradually appears from a blank white screen.

1. **Place the camera in record pause mode.** 60-A
2. **Press and hold the FADE button until the scene disappears completely from the viewfinder.**
3. **Press the start/stop button to start recording and then release the FADE button.**
   - The scene gradually fades in.



Fade Out

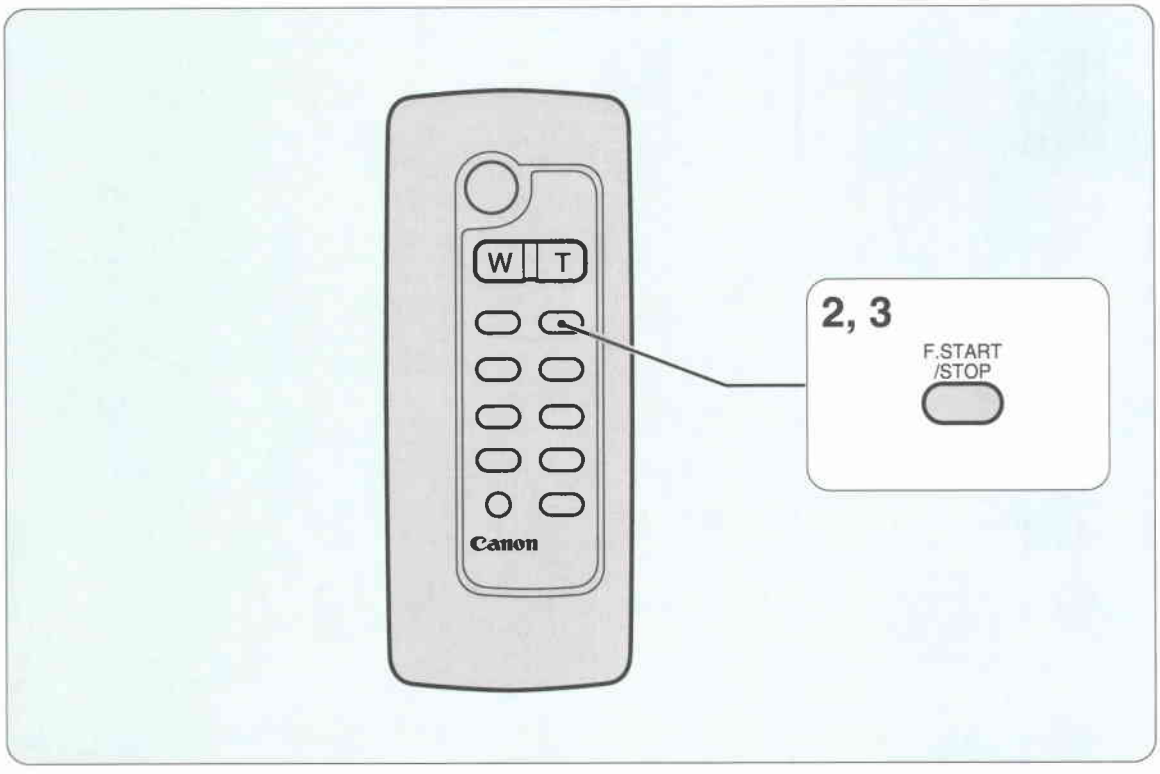
The scene gradually disappears, fading to a blank white screen.

1. Press and hold the FADE button during recording.
- The scene gradually fades out.

2. Press the start/stop button when the scene has disappeared completely.
- The camera goes into record pause mode.

3. Release the FADE button.

Notes:
- Sound fades along with the image.
- Titles, age, and date and time do not fade.
- The fade effect (but not wireless fade) can be used at any time during recording.



62-A

Wireless Fade

To begin and end recording with a smooth fade in and fade out from a distance and without camera shake.

1. Place the camera in record pause mode. 62-A

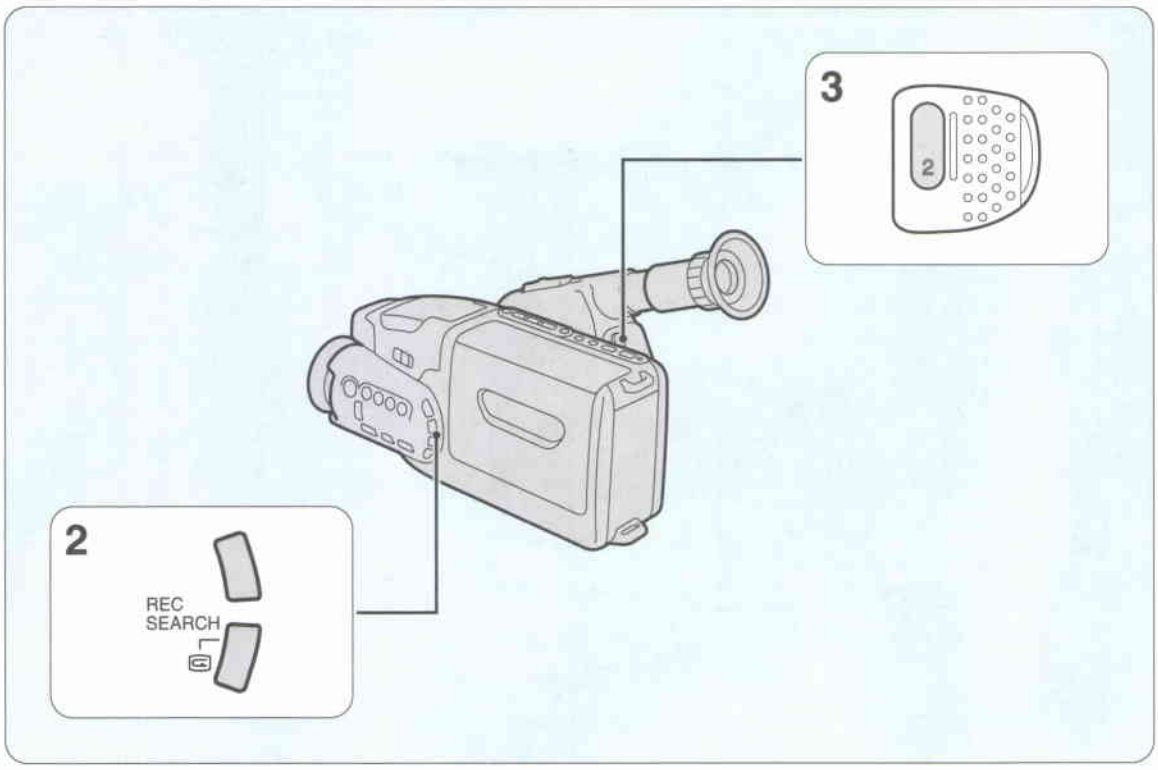
2. Press the F. START/STOP button.

- The scene disappears, recording begins about one or two seconds later, and then the picture fades in.

3. When the scene is recorded, press the F. START/STOP button again.

- The scene fades out, and the camera enters record pause mode about four seconds later.

To Resume Recording



63-A

63-B

Record Search

Use record search to locate the desired point to resume recording. Record search can also be used to eliminate noise between different scenes. Use this function when you make additional recordings on a previously used cassette — there will be no noise between a previously recorded scene and the new one.

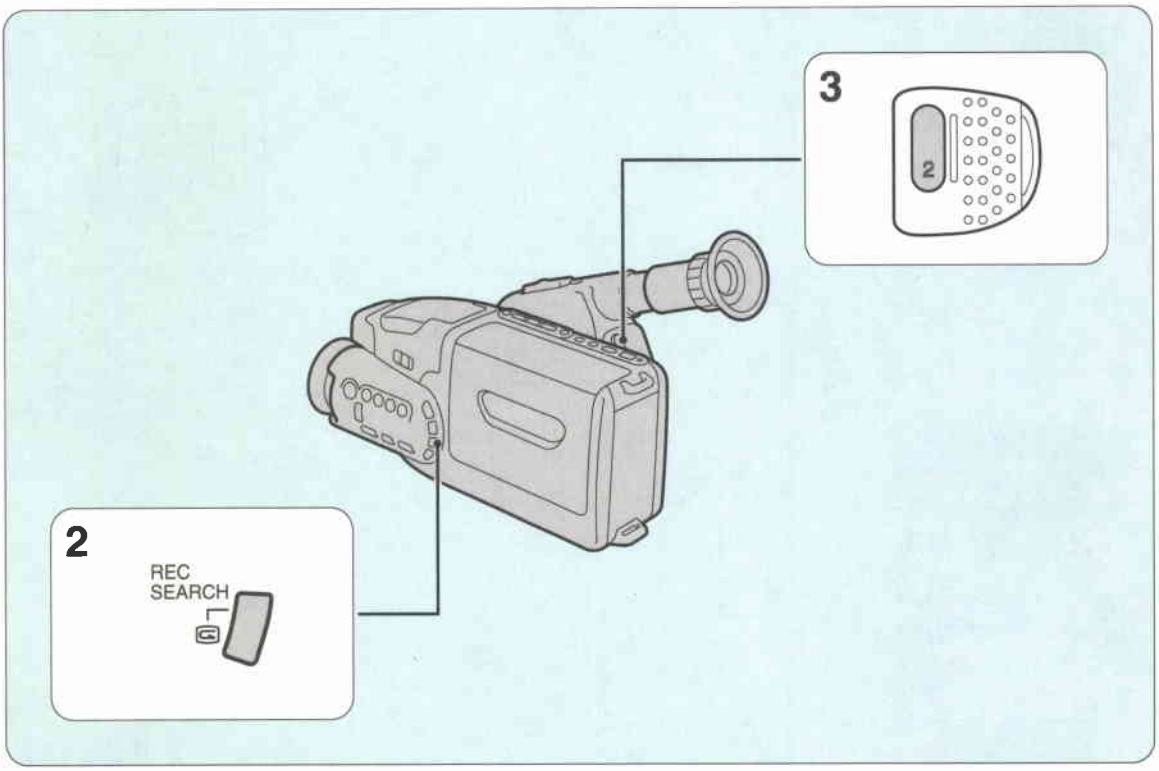
1. Place the camera in record pause mode. 63-A

2. Press the REC SEARCH + or – buttons to scroll forwards or backwards to locate the recording start position.

- Press and hold the + button to play the recording forward.
- Press and hold the – button to play the recording backward.
- The camera returns to record pause mode when you release the buttons.

3. Press the start/stop button.

- Recording starts. 63-B
- The tally lamp flashes rapidly.



64-A

Record Review

Press the ⟲ (Record Review) button during record pause mode to play back the last segment of the recorded scene (approximately three seconds) in the viewfinder. Once record review playback is complete, the camera returns to record pause mode where it left off.

1. Place the camera in record pause mode. 64-A

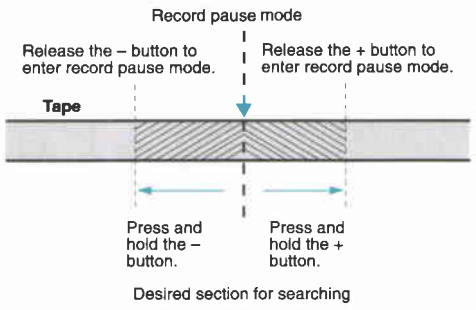
2. Press the ⟲ button.

- The scene plays back in the viewfinder.
- The camera returns to record pause mode after record review has ended.

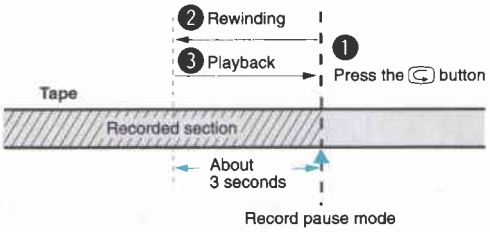
3. Press the start/stop button to resume recording.

- The tally lamp flashes rapidly.

65-A


Record pause mode
Release the – button to enter record pause mode.
Release the + button to enter record pause mode.
Tape
Press and hold the – button.
Press and hold the + button.
Desired section for searching

65-B



Explanation:

Record search (to resume recording)

65-A

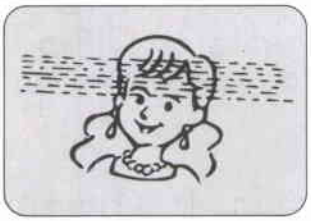
Searches the desired section to start recording, while in record pause mode.

Explanation:

Record review 65-B

Plays back your recording in the order ❶ to ❸ after record pause mode is entered. The camera returns to record pause mode after playback has ended.

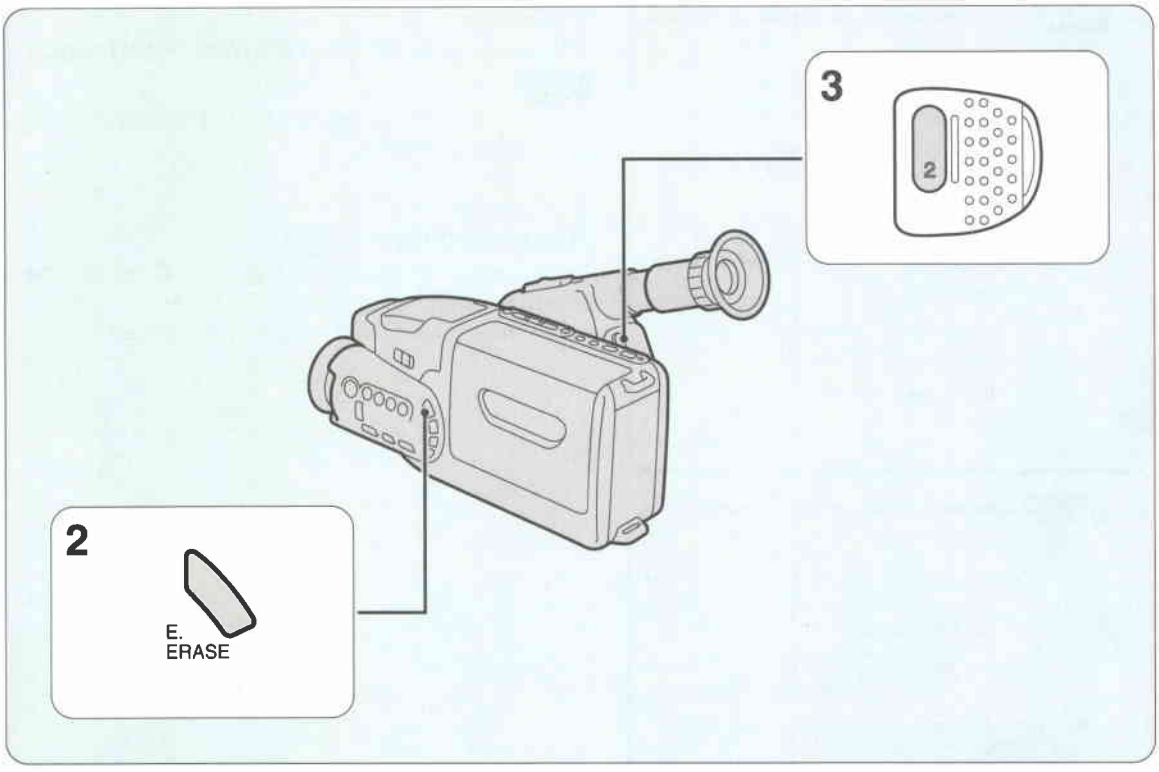
65-C



65-D

Note:

- Noise 65-C or skew 65-D may appear on the screen during record review mode or record search mode. This is not a malfunction.



66-A

PAUSE ✱

Edit-erase

When an unwanted object or sound is recorded, such as someone walking across the picture or the sound of a car horn, the edit-erase function can be used to quickly return to the precise point where recording began, and record the scene again. This function only operates during the first 40 seconds or so of recording.

For about 40 seconds after starting to shoot a scene a ✱ mark (asterisk) appears in the viewfinder next to the tape operations display. The edit-erase function can be used while this ✱ mark is displayed.

1. Make sure that ✱ (asterisk) is displayed, then press the start/stop button to pause recording.

66-A

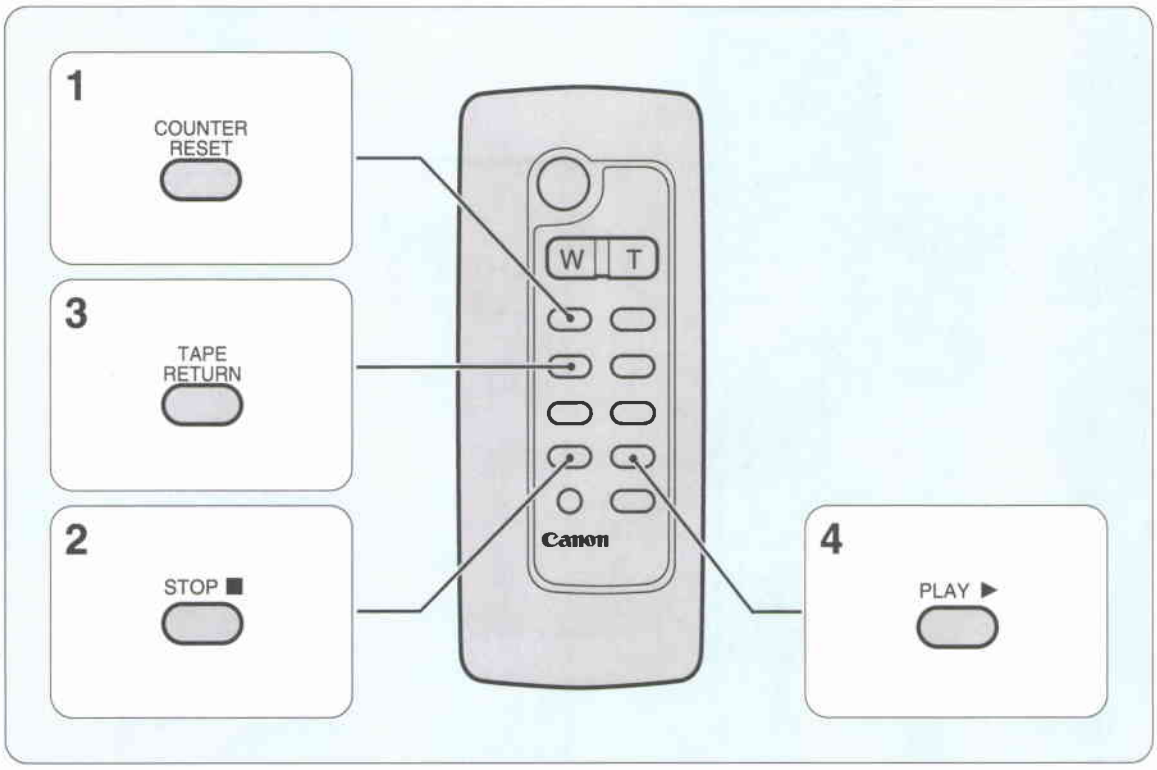
2. Press the E. ERASE button.

- The tape is rewound to the recording start point at 3 times normal speed, and the recorded picture is displayed (in reverse) in the viewfinder. The camera returns automatically to record pause mode at the start of the scene you want to record over.
- The asterisk disappears from the viewfinder.

3. Press the start/stop button to resume recording.

- The previously recorded scene is erased.
- The asterisk reappears.

Tape Return



67-A

Tape return allows you to quickly return to a desired scene on the cassette.

- The camera does not have a TAPE RETURN button. Use the wireless controller to operate tape return.

1. During playback, press the COUNTER RESET button if you come across a scene that you want to watch again later.

- The tape counter is reset to 0:00:00. 67-A

2. Press the ■ (STOP) button when playback finishes.

3. Press the TAPE RETURN button.

- The tape rewinds and stops automatically when the counter reading nears 0:00:00.

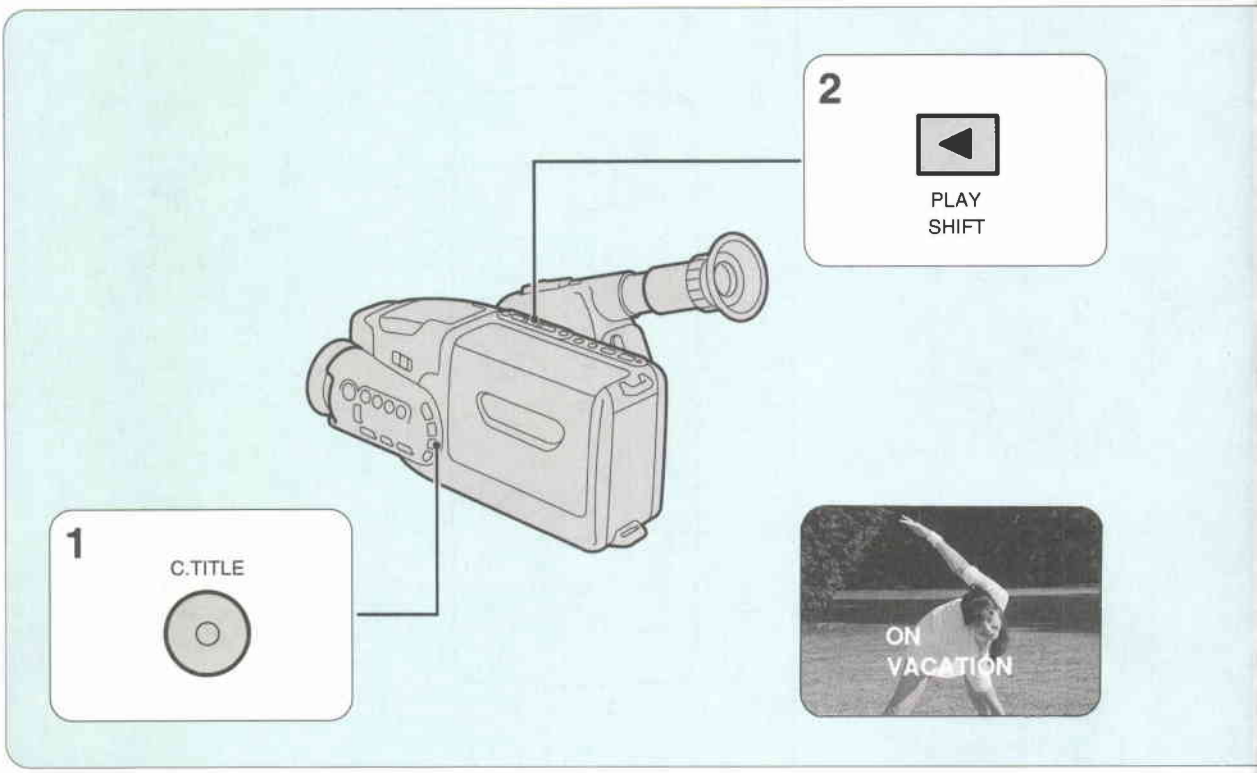
4. Press the ▶ (PLAY) button.

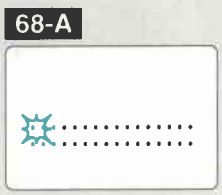
- Playback starts at the point where you pressed the COUNTER RESET button.

Notes:

- Every time you load a cassette, the tape counter is automatically reset to 0:00:00. This means that after recording you can use the tape return to locate the recording start point.
- The tape counter reading is only approximate. Use it as a guide.
- Tape return does not function when the tape counter reading is near 0:00:00.
- Press the ■ (STOP) button to cancel tape return.

Adding Titles to Recordings





The camera allows you to create and store character titles, which can be superimposed on recordings together with the date and time and/or age.

Creating Character Titles

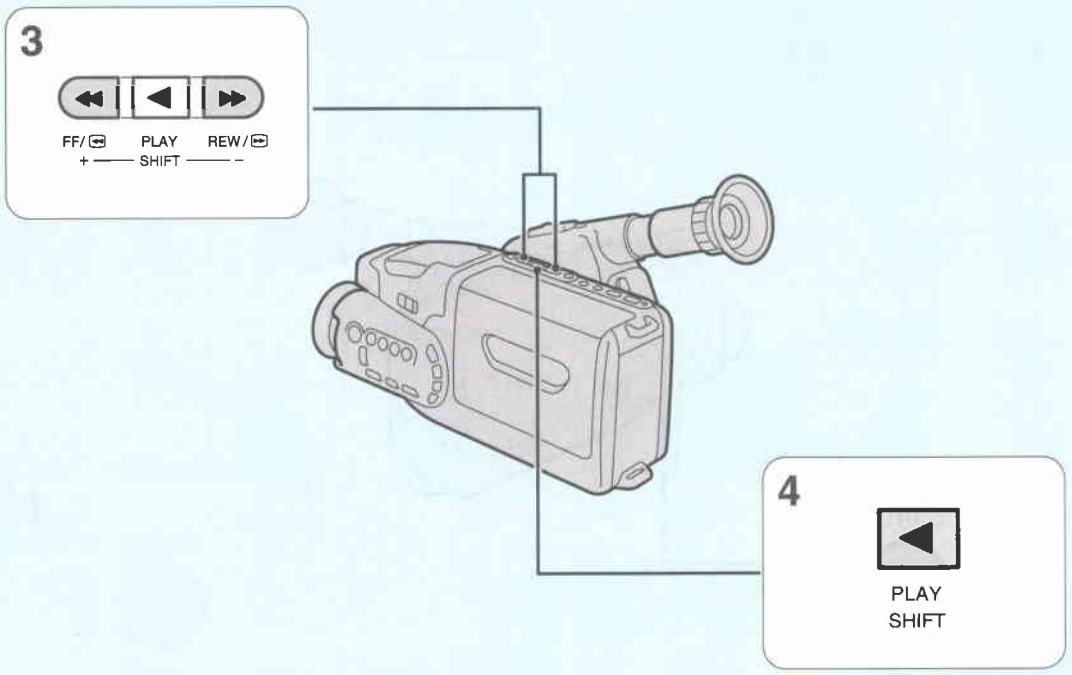
Remember to create your title before you start recording.
The title may be one or two lines of up to 16 characters each.

1. Press the C. TITLE button for more than 3 seconds to display the title lines in the viewfinder.

- A flashing dot or character indicates that the cursor is present. 68-A

2. Press the SHIFT button to move the cursor to the position where you want to start the title. 68-B

- Press once to move the cursor one space right.
- Press and hold to move the cursor continuously.
- The cursor does not move backwards.



69-A

3. Use the + and – buttons to scan the list of title characters.

- Press the + button to scan forward through the list.
- Press the – button to scan the list in reverse order.
- Press once to scan the characters one at a time.
- Press and hold to scan the characters quickly.

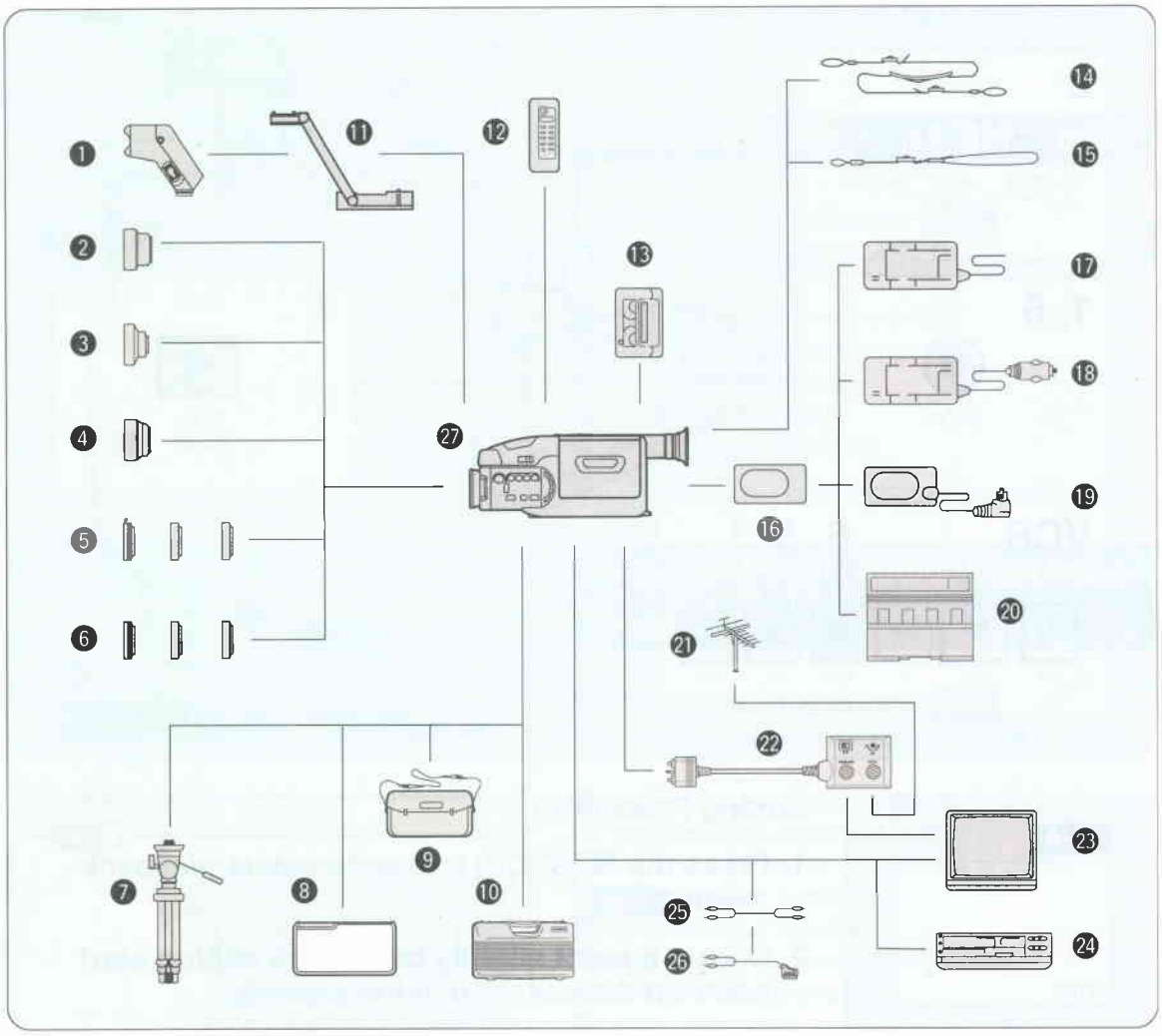
Title Characters List

→ A B C D E F G H I J K L M N O P Q R S T U V W X Y Z ←
→ □ & ✱ ! ? ; : " ' - / . , 9 8 7 6 5 4 3 2 1 0 □ Ë Ç Ñ Æ Å Ø Ü Ö Ä ←

- If you select □, a flashing dot appears in the viewfinder, but a space will appear during actual recording and playback.
- Press the C. RESET button to erase all the characters at and to the right of the cursor.

4. When the character you want is displayed, press the SHIFT button again to move to the next cursor position. 69-A

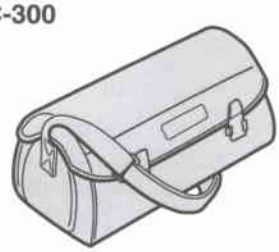
Canon E333D Video System Chart



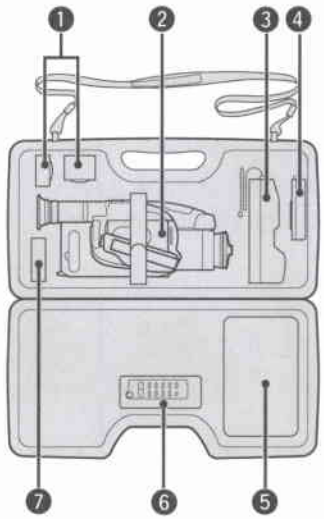
❶ VL-20 Battery Video Light
❷ WD-37 Wide-converter
❸ TL-37 Tele-converter
❹ WA-37 Wide Attachment
❺ FS-37 Filter Set
❻ FS-37U Filter Set
❼ Tripod
❽ RS-500 Rain Shield
❾ SC-300 Soft Carrying Case
❿ HC-500 System Case
⓫ SA-1 Adapter Bracket
⓬ WL-52 Wireless Controller
⓭ 8mm Video Cassette
⓮ SS-300 Shoulder Strap
⓯ WS-20 Wrist Strap
⓰ BP-E77K, BP-E718, BP-E722 or BP-E722D Battery Pack
⓱ CA-100 Compact Power Adapter
⓲ CB-110 Car Battery Adapter
⓳ DC-100 DC Coupler
⓴ MC-100 Multi-battery Charger
㉑ Aerial
㉒ RU-100 RF Unit
㉓ TV
㉔ VCR
㉕ C-150 AV Cable
㉖ PC-150 SCART Cable
㉗ E333D

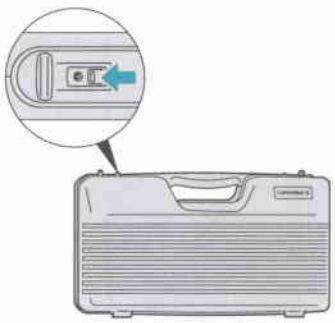
Carrying Cases

SC-300



HC-500





SC-300 Soft Carrying Case

The optional SC-300 Soft Carrying Case provides lightweight protection for the camera and accessories.

HC-500 System Case

The optional HC-500 System Case helps protect the camera and its accessories during transportation and storage.

The HC-500 properly stores the following items:

1. BP-E77K or BP-E722 Battery Pack
2. Camera with cassette and shoulder strap / wrist strap attached
3. CA-100 Compact Power Adapter or CB-110 Car Battery Adapter
4. BP-E718 Battery Pack
5. Coaxial cable or C-150 AV Cable, DC-100 DC Coupler, PC-150 SCART Cable, RU-100 RF Unit, Wide-converter / Tele-converter, etc.
6. WL-52 Wireless Controller
7. One additional cassette

Opening the Case

Slide the latches on both sides of the case as illustrated.

- Open the case with the "UP" sticker pointing upward.

Attaching the Shoulder Strap

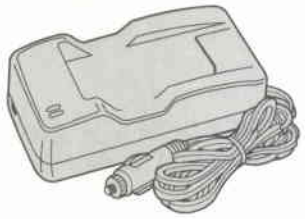
Attach the shoulder strap to the strap attachment bars, and adjust it to the most comfortable length.

Notes:

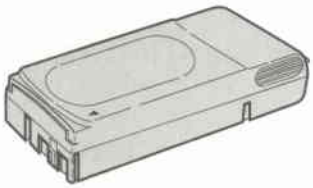
- Do not leave the case in areas of extreme heat.
- Do not expose the case to strong vibrations or shock.
- Do not place heavy objects on top of the case.
- Two keys are provided with the HC-500 System Case.
- Power is slowly drained while the battery pack is attached to the camera, even when the camera is turned off. Remove the battery pack when you don't expect to use the camera.

Optional Accessories

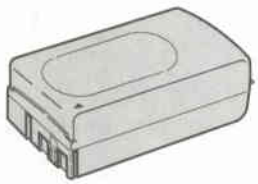
CB-110



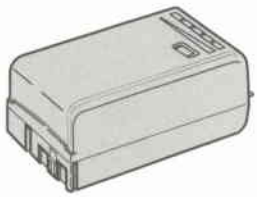
BP-E718



BP-E722



BP-E722D



MC-100

RS-500

CB-110 Car Battery Adapter

For recording using car battery.
Plug into cigarette lighter socket.
For use only with 12 or 24 V DC negative ground car battery.

BP-E718 Battery Pack

Use when shooting for long periods of time. The continuous recording time of the BP-E718 is approximately 100 minutes.

BP-E722 Battery Pack

Used for lengthy recording, its capacity is about double the BP-E77K. Hold the camera with both hands when using this battery.

BP-E722D Battery Pack

The BP-E722D is a rechargeable nickel cadmium battery equipped with five LED indicators for displaying the remaining charge.

MC-100 Multi-battery Charger

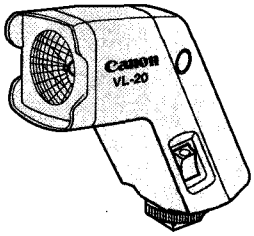
The MC-100 Multi-battery Charger is a sequential high-speed charger controlled by a microcomputer for charging up to four Canon battery packs. Also the MC-100 automatically performs charging, discharging and recharging to refresh battery packs.

- Charging time: 45 min. (BP-E77K)
  80 min. (BP-E718)
  90 min. (BP-E722/BP-E722D)

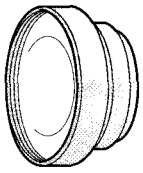
RS-500 Rain Shield

A vinyl cover to protect the camera from light rain or mist.

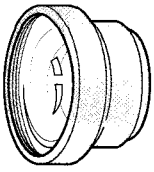
VL-20



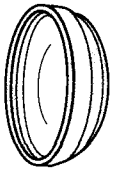
TL-37



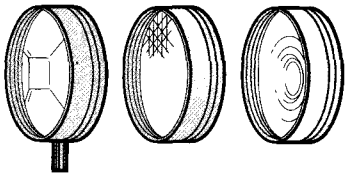
WD-37



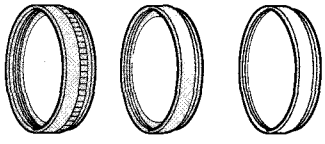
WA-37



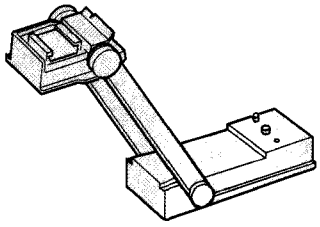
FS-37



FS-37U



SA-1



VL-20 Battery Video Light

This light, compact video light uses the BP-E77K or BP-E722 Battery Pack and is ideal for indoor or outdoor shooting.

TL-37 Tele-converter

This tele-converter is a magnification converter lens that increases the focal length of the camera lens by a factor of 1.4. Switch to manual focus when using this lens. The zoom can be operated as usual.

WD-37 Wide-converter

This wide converter decreases the focal length by a factor of 0.75. Switch to manual focus when using this lens. The zoom can be operated as usual.

WA-37 Wide Attachment

This optional wide attachment decreases the focal length by a factor of 0.75. When using this lens attachment, first switch to macro recording.

FS-37 Filter Set

The FS-37 Filter Set contains three filters: multiple image filter 5X, R-cross filter 6X and zoom-spot filter.

FS-37U Filter Set

The FS-37U Filter Set contains three filters: UV, ND8 and circular PL. When using the PL filter, first zoom and switch to manual focus. Then adjust the PL filter to minimize light reflection.

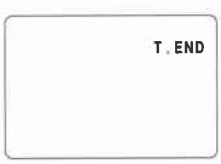
SA-1 Adapter Bracket

When you want to use the VL-20 Battery Video Light, use the SA-1 to attach it to the camera.

Problems and Troubleshooting

Use the following checklist for troubleshooting if you have problems with your camera. Consult your local dealer or service outlet if problems persist.
Be sure all connections are properly made when using the camera with other equipment.

The following warnings may appear in the viewfinder:

Warning	Cause	Remedy
	The battery pack charge is low.	Refer to "Battery Pack Notes" (see p. 18).
	Condensation has formed inside the camera.	Refer to "Condensation" (see p. 81).
	The safety mechanism is activated.	Unload and reload the cassette.
	The lithium battery is not in place properly or the charge is low.	Insert a new lithium battery (see p. 22).
	A cassette has not been loaded.	Load a cassette (see p. 23).
	The tape has ended.	Rewind the tape or use another cassette.

Problem	Cause	Remedy
The camera does not turn on.	The battery pack charge is low.	Replace it with a fully charged battery pack.
The camera turns off during operation (using a battery pack).	The battery pack charge is low.	Replace it with a fully charged battery pack.
	Record pause mode has lasted for more than 7 minutes.	Turn the camera on again.
The cassette compartment does not open.	The battery pack charge is low.	Replace it with a fully charged battery pack.
The camera does not function when an operation button is pressed.	The camera is turned off.	Turn the camera on.
	A cassette has not been loaded.	Load a cassette.
	The battery pack is not properly attached to the camera.	Attach the battery pack securely to the camera (see p. 17).
The start/stop button is pressed, but recording does not start.	The camera is turned off.	Turn the camera on.
	A cassette has not been loaded.	Load a cassette.
	The tape has ended ("T. END" appears in the viewfinder).	Rewind the tape or use another cassette.
	The erasure prevention switch on the cassette is set to prevent recording	Use another cassette or set the switch to enable recording (see p. 24).
	The camera is in playback mode.	Press the ● (REC MODE) button.
No picture appears in the viewfinder.	The lens cap is attached.	Remove the lens cap.
Focus can not be adjusted.	The zoom lens is in macro range.	Press the T button to exit macro range.
	The viewfinder dioptre is not properly adjusted.	Turn the dioptre adjustment ring until the viewfinder display becomes clear (see p. 27).
	The autofocus window is obscured.	Remove the obstacle from the autofocus window.
Playback does not start when the PLAY button is pressed.	The camera is in record pause or record mode.	Press the ■ (STOP) button.
	The camera is turned off.	Turn the camera on and press the ■ (STOP) button.
	A cassette has not been loaded.	Load a cassette.
	The tape has ended ("T. END" appears in the viewfinder).	Rewind the tape or use another cassette.

Problem	Cause	Remedy
The tape is moving, but no picture appears on the TV monitor.	For a TV without audio/video input terminals: the video channel has not been set properly on both the TV and the RF unit.	Set the TV and the RF unit to the appropriate video channel.
	For a TV with audio/video input terminals: The TV/VIDEO selector on the TV has not been set to VIDEO.	Set the TV/VIDEO selector to VIDEO.
	The video heads are dirty.	Clean the video heads using the optional CK-E1 Cleaning Kit.
The pop-up light will not turn on.	The battery pack is exhausted.	Charge the battery pack.
	The camera is not in record pause or record mode.	Place the camera in record pause or record mode.
	The camera is not turned on.	Turn the camera on.
	The bulb has burned out.	Replace the bulb.
	A cassette has not been loaded.	Insert a cassette and place the camera in record pause or record mode.

80-A

80-B

Smear 80-A

A luminous bar appears vertically on the screen where an excessively bright scene was recorded.
Smear is caused when:

- Spotlights are directly recorded, on a stage for example.
- Burning candles or other burning objects are recorded directly.
- Objects reflecting light, such as car bodies and traffic signs, are recorded directly.

Poor playback picture on TV monitor 80-B

Loss in video playback picture quality such as blurring, distortion or noise usually means that the video heads have become dirty. Use the optional Canon 8mm Video Head Cleaning Cassette CC-8 included in the Canon 8mm Video Cleaning Kit CK-E1 to clean the video heads. See the CC-8 instruction manual for details.

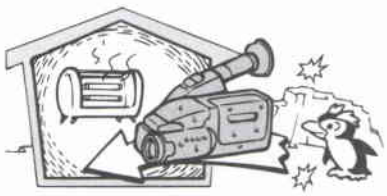
Note:

- This equipment contains a microprocessor. If external noise or interference occurs, random letters may appear in the viewfinder or normal operation may be interrupted. In this case, remove and then replace the power source (and if necessary, the lithium battery).

Condensation (DEW)

81-A

A



B

C

D

81-B

What is condensation?

Condensation (DEW) means tiny droplets of water that occasionally form on the camera surface when it is moved from a cold place to a warm place. Using the camera when condensation is present may damage both tape and camera.

Condensation is likely to occur when:

81-A

A. The camera is brought from a cold place to a warm place.

B. A cold room is heated rapidly.

C. The camera is taken from an air-conditioned room to a warm and humid place.

D. The camera is placed in a humid environment.

Preventing condensation

Remove the cassette and place the camera in a plastic bag prior to bringing it into a warm area where condensation is likely to occur. Wait until the camera reaches room temperature before removing it from the bag.

When condensation is detected

When condensation is detected in the camera, the OPERATE indicator flashes, "DEW" flashes in the viewfinder and the tape automatically stops.

81-B

Immediately remove the cassette, leave the cassette compartment open and turn the camera off. Leave the camera in a dry place until the condensation evaporates.

- Sometimes "DEW" may not appear in the viewfinder until 10–15 minutes after condensation has formed.

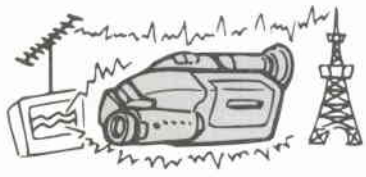
To start using the camera again

Even if "DEW" and the OPERATE indicator no longer flash when the camera is turned on, wait at least one more hour before attempting operation. The time required for condensation to clear varies with the surrounding conditions; it can be as long as an hour.

Cautions

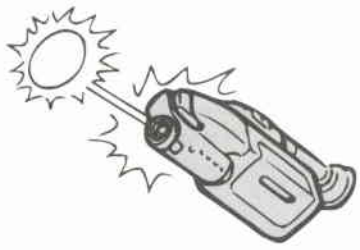
A

B



C

D



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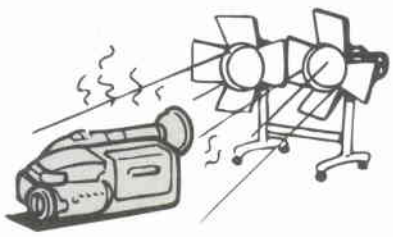


During Use

A. Avoid High Temperatures and High Humidity.

Do not expose the camera to high temperatures or high humidity, such as inside a car during hot weather, when all the doors and windows are shut. Such exposure can cause damage.

B. Avoid Exposure to Strong Electromagnetic Waves.

Do not use the camera close to sources of magnetic or electric fields (power plant, TV tower, TV set, magnets, motors, audio equipment, etc.).

C. Do Not Expose the Camera to Rain or Water.

Place a protective covering over the camera if you'll be recording in the rain, to reduce the risk of fire or electric shock. If, somehow, water does get into the camera, contact qualified service personnel as soon as possible.

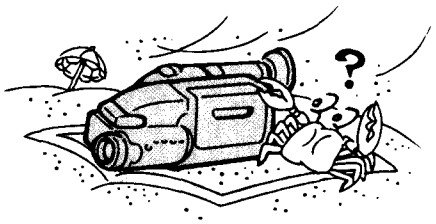
D. Avoid Pointing the Lens into Direct Sunlight or Other Strong Light Sources.

Do not aim the lens directly at the sun or other strong light, or leave the lens aimed at a very bright subject since this can cause damage.

E. Do Not Expose the Camera to Excessive Heat:

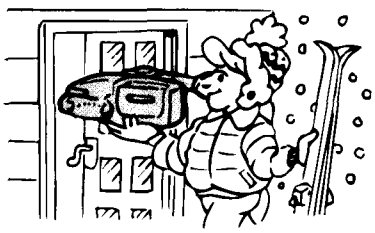
When using lighting equipment be sure not to expose the camera to too much heat radiating from such equipment.

F

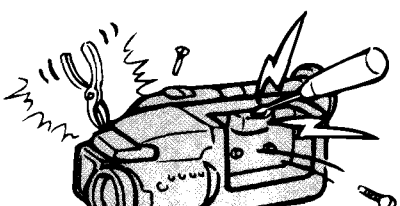


G

H



I



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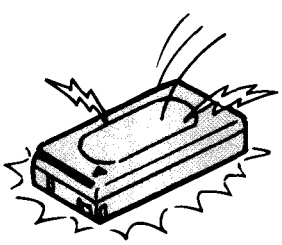

F. Always Replace the Lens Cap.

Always replace the lens cap after use to prevent sand and dust from getting on the lens. Be especially careful to affix the cap on windy days.

G. Do Not Expose the Camera to Shock or Vibrations.

Be sure to handle the camera gently. Vibration or shock can cause damage.

H. Avoid Sudden Changes in Temperature.

If the camera is suddenly brought into a warm place from a cold place, condensation can form on the internal parts and lens. So take appropriate care when moving the camera.

I. Do Not Disassemble the Camera.

It is very dangerous to disassemble the camera or touch any of its internal parts, as you may risk electric shock or other hazards. If the camera does not function properly, take it to qualified service personnel.

J. Use the Battery Pack Correctly, and Only Use Recommended Accessories.

Carefully read the instructions that come with the battery pack before use. And to reduce the risk of electric shock and to reduce annoying interference, use the recommended accessories only.

Maintenance

Keep the Heads Clean.

The video heads should be cleaned only when necessary, preferably with the Canon 8mm Video Head Cleaning Cassette CC-8 included in the Canon 8mm Video Cleaning Kit CK-E1.

Clean the Camera with a Soft, Dry Cloth.

The camera should be cleaned using a soft, dry cloth. Do not use chemically treated cloth or volatile solvents such as paint thinner, since this can damage the unit.

Store the Camera Properly.

If you do not intend to use the camera for some time, store it in an area free of moisture and dust, and where the ambient temperature is no higher than 30°C.

Store Cassette Tape Properly.

Do not place cassettes in areas exposed to direct sunlight, near heat-radiating sources such as stoves, or close to magnetic bodies such as speakers, since these can cause tape deformation and damage to valuable recordings.

Check the Operation of Each Component.

If the camera has not been used for a long time, be sure to check that each component functions correctly before use.

Specifications

E333D

Power supply (rated):	6 V DC
Power consumption:	5.6 W (during recording in autofocus mode)
Television system:	CCIR standard (625 lines, 50 fields) PAL colour signal
Video recording system:	2 rotary heads, helical scanning system Luminance signal: FM azimuth recording Colour signal: Converted subcarrier phase shift recording (8mm video standard)
Audio recording system:	Frequency multiplexing with the video signal by 2 rotary heads (1 channel)
Image sensor:	320,000 pixels (300,000 effective pixels), 1/3-inch CCD (charge-coupled device)
Tape format:	8mm, metal particle*
Tape speed:	20.051 mm/s (SP) 10.026 mm/s (LP)
Maximum recording time:	3 hours with P5-90 video cassette, in LP mode.
Lens:	f/2.0, 10X power zoom, 6.7–67 mm focal length, macro mechanism (wide/tele)
Focusing system:	Active autofocus (using infrared beams), manual focusing possible
Minimum focusing distance:	0.6 m or 4 mm in wide macro
Recommended illumination:	More than 100 lux
Minimum illumination:	2 lux
Filter diameter:	37 mm
Electronic viewfinder:	0.6-inch monochrome CRT
Microphone:	Nondirectional electret condenser microphone
Output level:	Video: 1 Vp-p/75 ohms, unbalanced (video output terminal) Audio: –10 dBV/less than 3 kohms, unbalanced (audio output terminal)
Dimensions (W x D x H):	122 x 257 x 115 mm
Weight:	920 g excluding battery pack

Pop-up Light

Central light intensity:	Approx. 120 cd
Illumination angle:	Approx. 35°
Central luminosity:	Approx. 35 lux (2 m)
Colour temperature:	Approx. 3200 K
Power consumption:	4 W (6 V)
Required bulb:	Canon Halogen Bulb MHL-5.7 V 4 W
Bulb life:	Approx. 50 hours
Operating temperature range:	0°C–40°C
Power supply:	Battery pack or DC coupler mounted on the main body
Illumination time:	Approx. 20 min. (with BP-E77K in continuous use)

* Canon recommends metal particle tape.

Weight and dimensions are approximate. Errors and omissions excepted.
Subject to change without notice.

MEMO

Canon

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